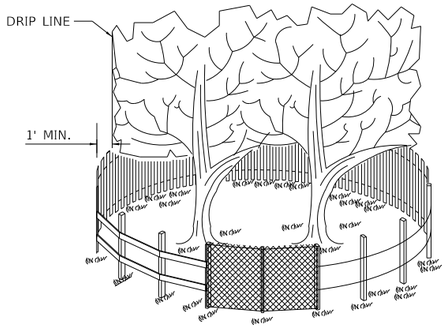
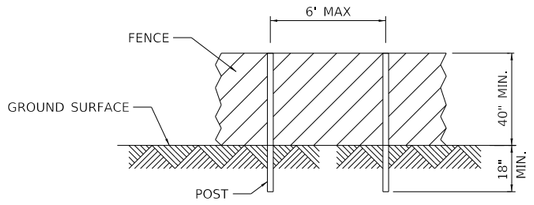
GENERAL NOTES

1) SEEDING USAGE - CLASS 2A (SALT TOLERANT ROADSIDE MIX) USED FOR NEW CONSTRUCTION OF LIMITED ACCESS ROUTES AND CLASS 4A USED AS NATIVE GRASS AT WETLAND BUFFERS.

2) TOPSOIL WILL BE PLACED ON FINAL SLOPES WHICH WILL NOT BE DISTURBED BY FUTURE CONSTRUCTION. TOPSOIL WILL NOT BE PLACED ON SURFACES WHICH WILL BE PAVED IN THE FUTURE, NOR ON TEMPORARILY STEEP SLOPES.



SIDE VIEW

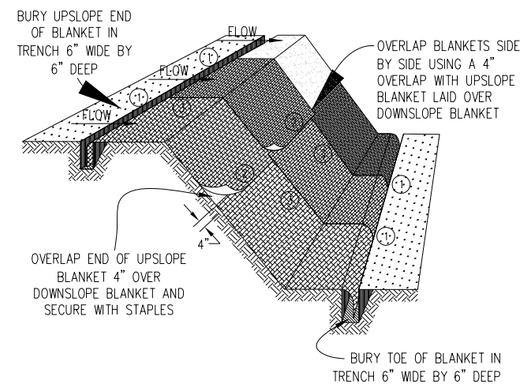


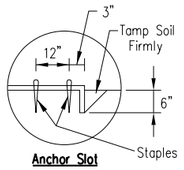
POST AND FENCE DETAIL

NOTES:

1. THE FENCE SHALL BE LOCATED A MINIMUM OF 1 FOOT OUTSIDE THE DRIP LINE OF THE TREE TO BE SAVED AND IN NO CASE CLOSER THAN 5 FEET TO THE TRUNK OF ANY TREE.
2. FENCE POSTS SHALL BE EITHER STANDARD STEEL POSTS OR WOOD POSTS WITH A MINIMUM CROSS SECTIONAL AREA OF 30 SQ. IN.
3. THE FENCE MAY BE EITHER 40" HIGH SNOW FENCE, 40" PLASTIC WEB FENCING OR ANY OTHER MATERIAL AS APPROVED BY THE ENGINEER/INSPECTOR.

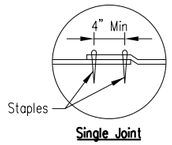
TREE PROTECTION – FENCING





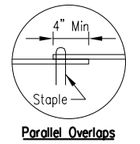
Anchor Slot

DETAIL 1



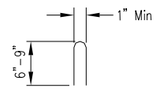
Single Joint

DETAIL 2

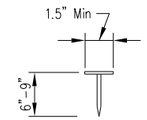


Parallel Overlaps

DETAIL 3



STAPLE DETAIL



PUSH PIN DETAIL

NOTES:

1. Staples shall be placed in a diamond pattern at 2 per s.y. for stiched blankets. Non-stiched shall use 4 staples per s.y. of material. This equates to 200 staples with stiched blanket and 400 stapels with non-stiched blanket per 100 s.y. of material.
2. Staple or push pin lengths shall be selected based on soil type and conditions. (minimum staple length is 6")
3. Erosion control material shall be placed in contact with the soil over a prepared seedbed.
4. All anchor slots shall be stapled at approximately 12" intervals.

EROSION CONTROL BLANKET INSTALLATION DETAIL

FILE NAME = D122318-sht-lndscpschcedule.dgn	USER NAME = ZimonA	DESIGNED - HK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LANDSCAPING NOTES
exp U.S. Services Inc. Chicago, IL BUILDINGS+EARTH & ENVIRONMENT+ENERGY INDUSTRIAL+INFRASTRUCTURE+SUSTAINABILITY		DRAWN - HK	REVISED -		
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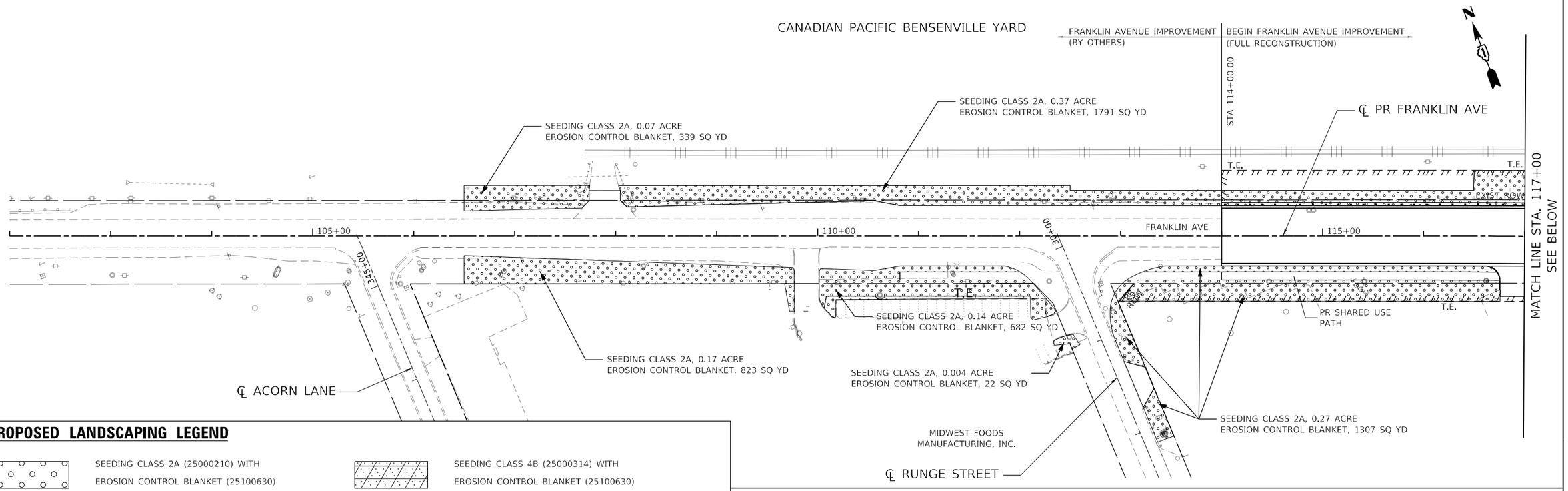
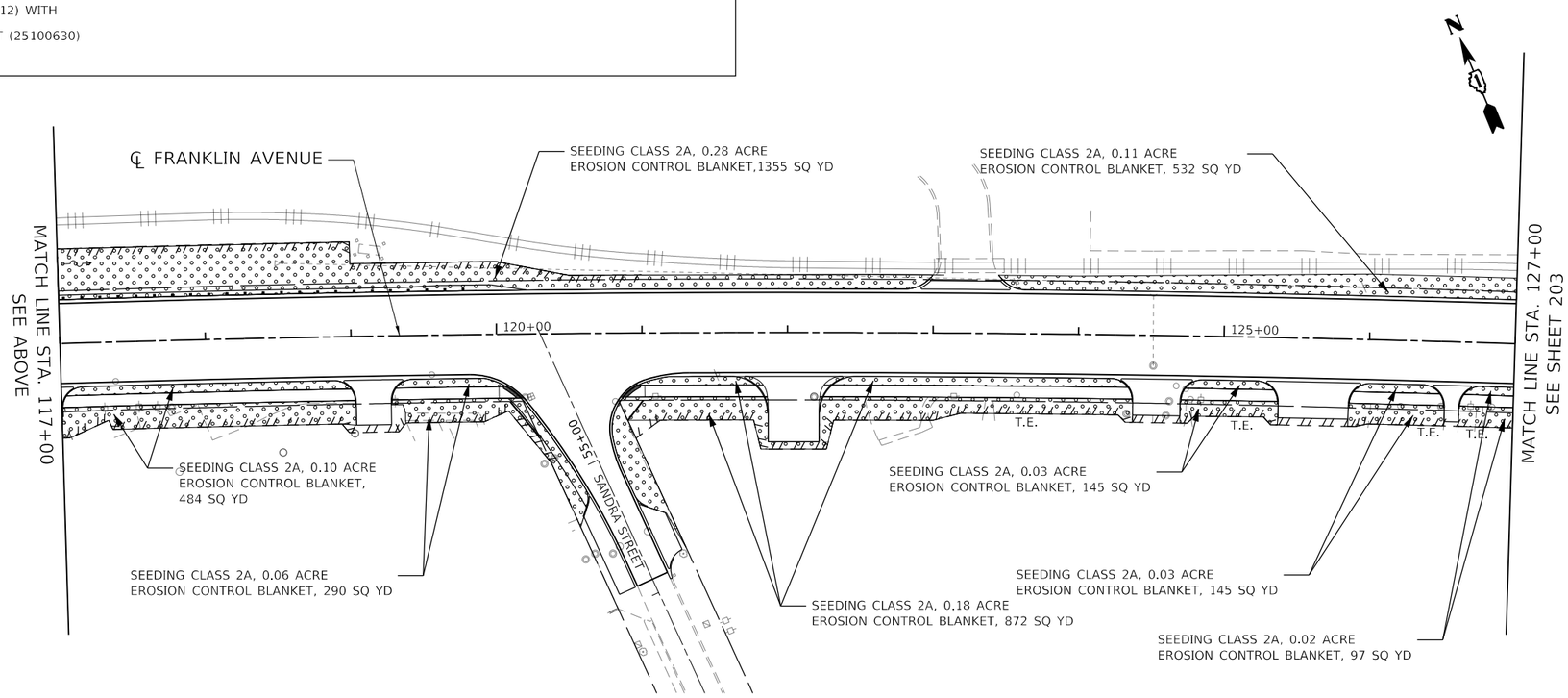
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	201
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		



PROPOSED LANDSCAPING LEGEND

- SEEDING CLASS 2A (25000210) WITH EROSION CONTROL BLANKET (25100630)
- SEEDING CLASS 4A (25000312) WITH EROSION CONTROL BLANKET (25100630)
- SEEDING CLASS 4B (25000314) WITH EROSION CONTROL BLANKET (25100630)



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	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING

SCALE: 1"=50' | SHEET OF SHEETS | STA. 102+00 TO STA. 127+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

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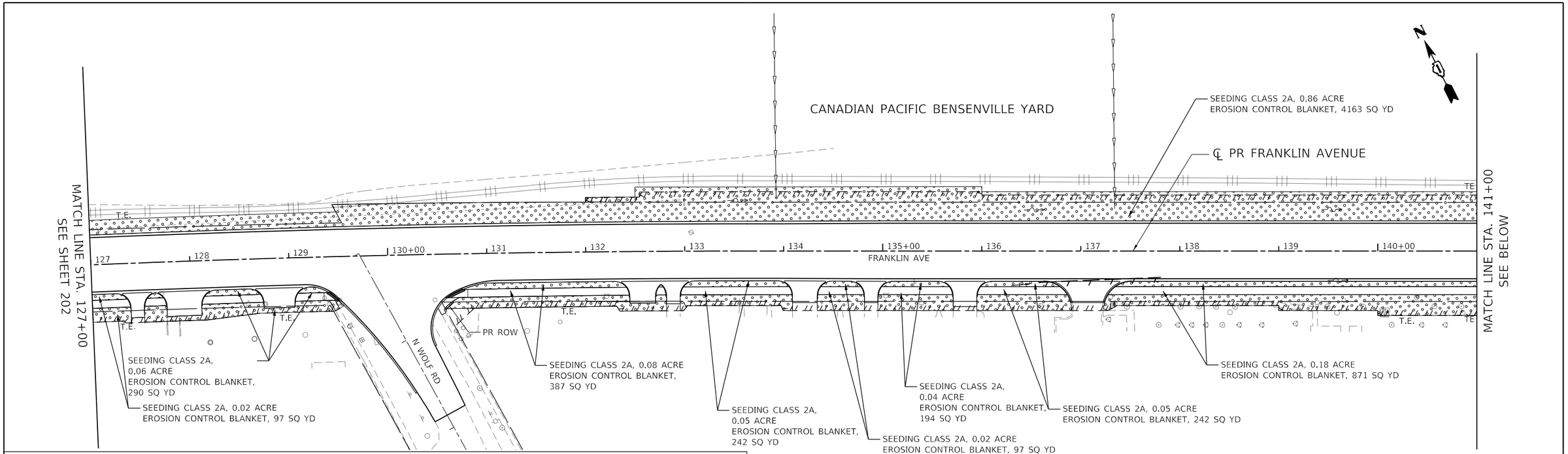
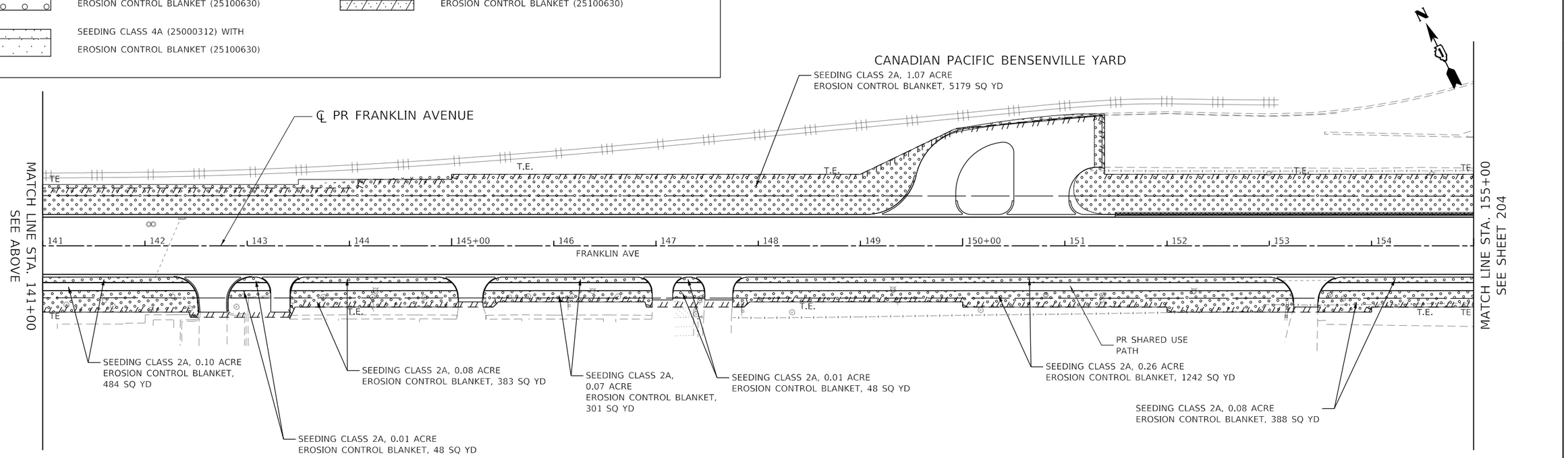


PROPOSED LANDSCAPING LEGEND

SEEDING CLASS 2A (25000210) WITH
EROSION CONTROL BLANKET (25100630)

SEEDING CLASS 4B (25000314) WITH
EROSION CONTROL BLANKET (25100630)

SEEDING CLASS 4A (25000312) WITH
EROSION CONTROL BLANKET (25100630)



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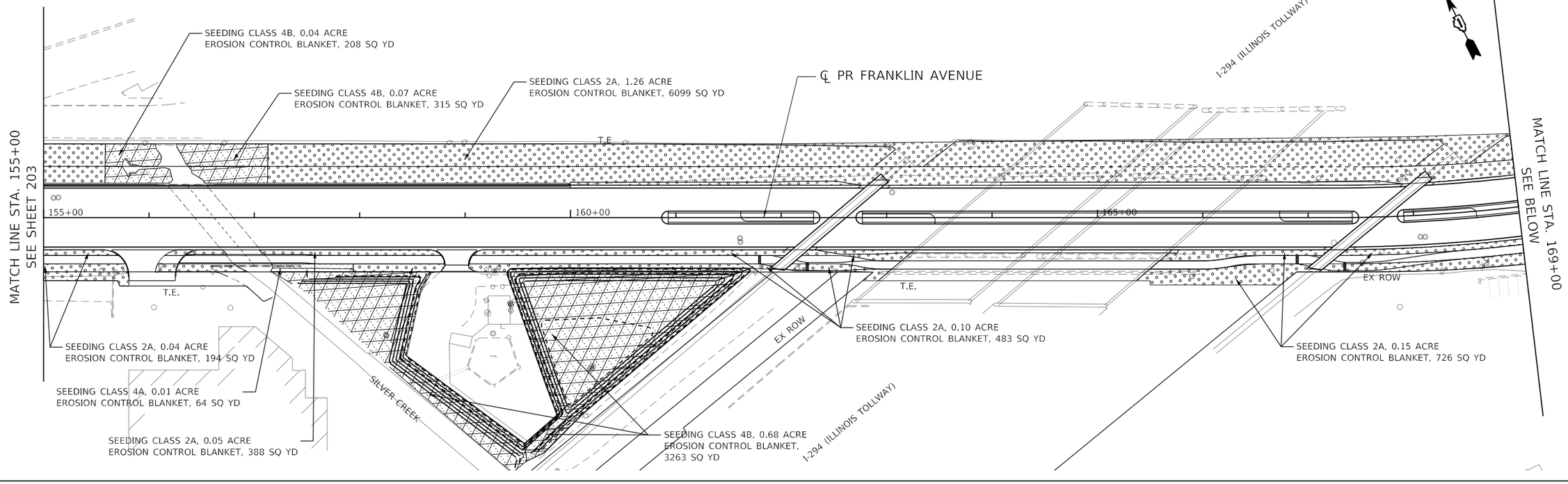
	PLOT SCALE = 100.0000 ' / in.	CHECKED - SH	REVISED -	
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -	

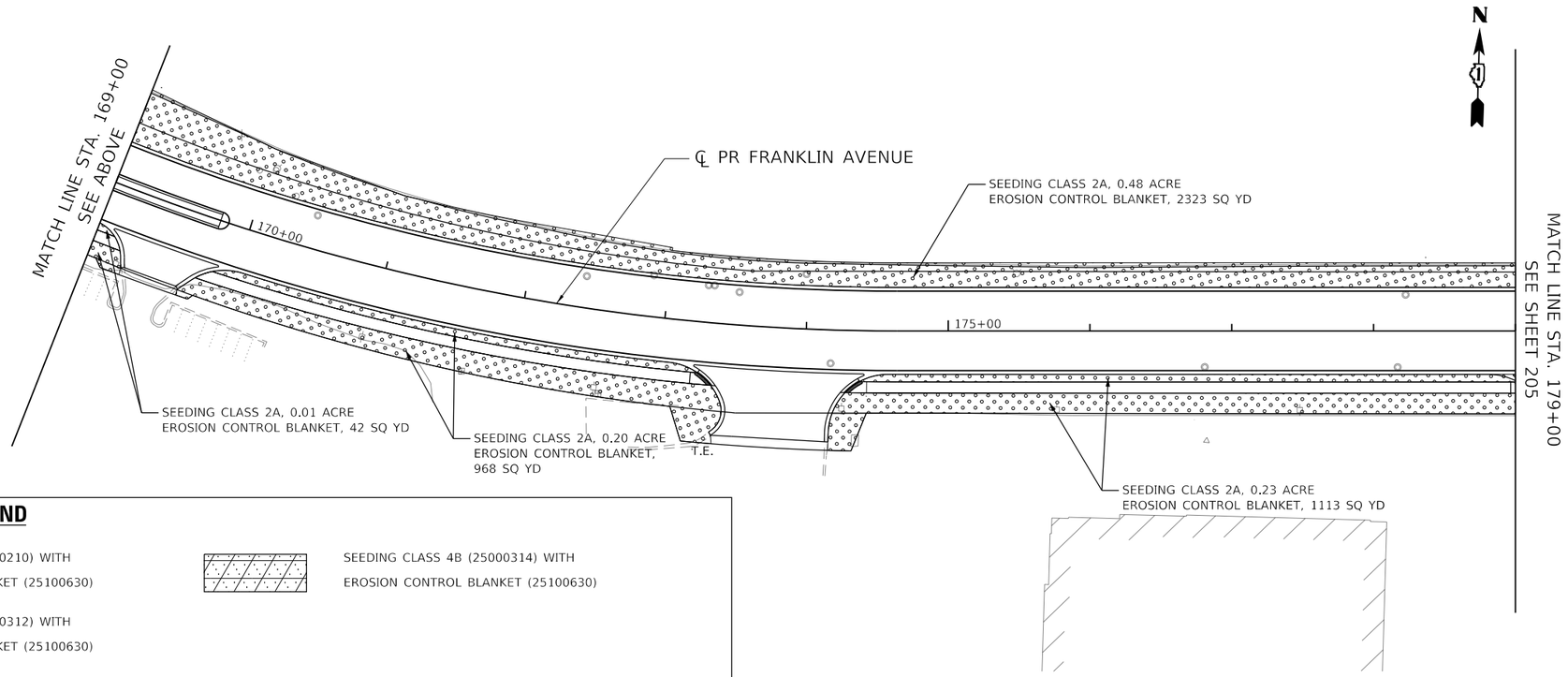
LANDSCAPING

SCALE: 1"=50' | SHEET OF SHEETS | STA. 127+00 | TO STA. 155+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	203
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

CANADIAN PACIFIC BENSENVILLE YARD





PROPOSED LANDSCAPING LEGEND

SEEDING CLASS 2A (25000210) WITH
EROSION CONTROL BLANKET (25100630)

SEEDING CLASS 4B (25000314) WITH
EROSION CONTROL BLANKET (25100630)

SEEDING CLASS 4A (25000312) WITH
EROSION CONTROL BLANKET (25100630)

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	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING

SCALE: 1"=50' | SHEET OF SHEETS | STA. 155+00 TO STA. 179+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	204
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

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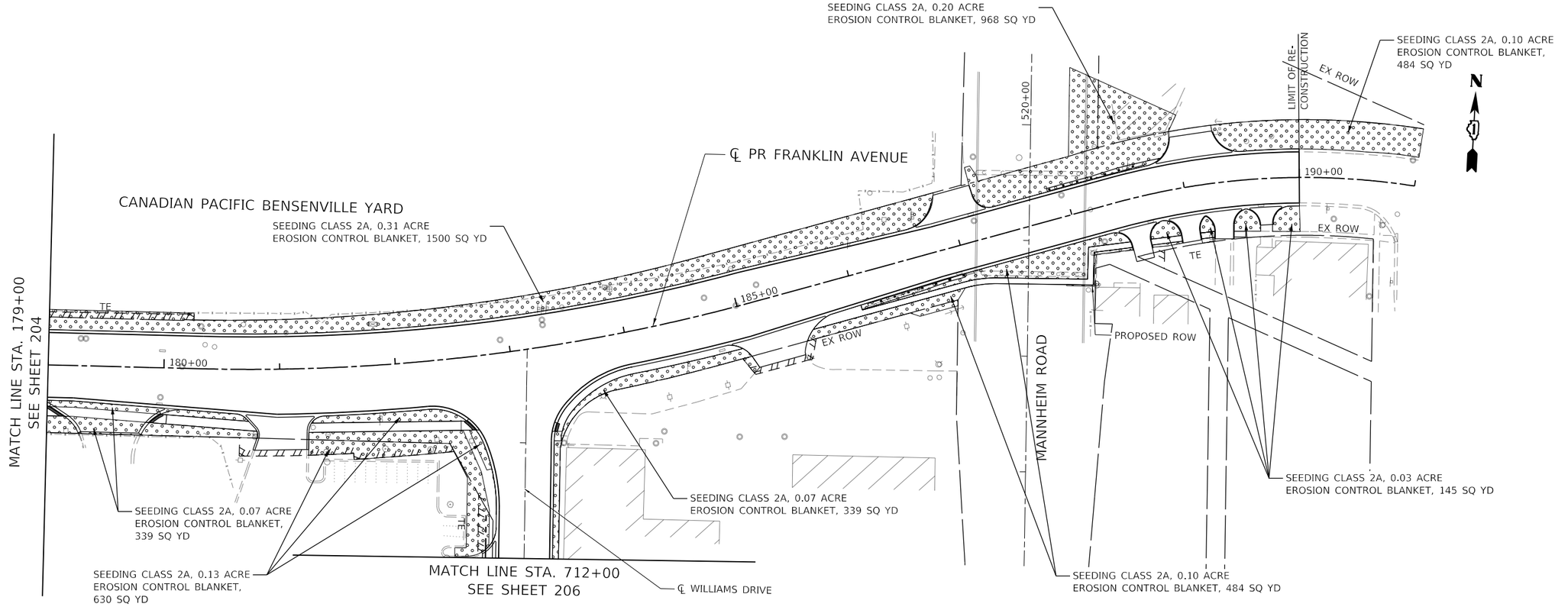

PROPOSED LANDSCAPING LEGEND

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EROSION CONTROL BLANKET (25100630)

SEEDING CLASS 4A (25000312) WITH
EROSION CONTROL BLANKET (25100630)

SEEDING CLASS 4B (25000314) WITH
EROSION CONTROL BLANKET (25100630)

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	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING

SCALE: 1"=50' | SHEET OF SHEETS | STA. 179+00 | TO STA. 190+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	205
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

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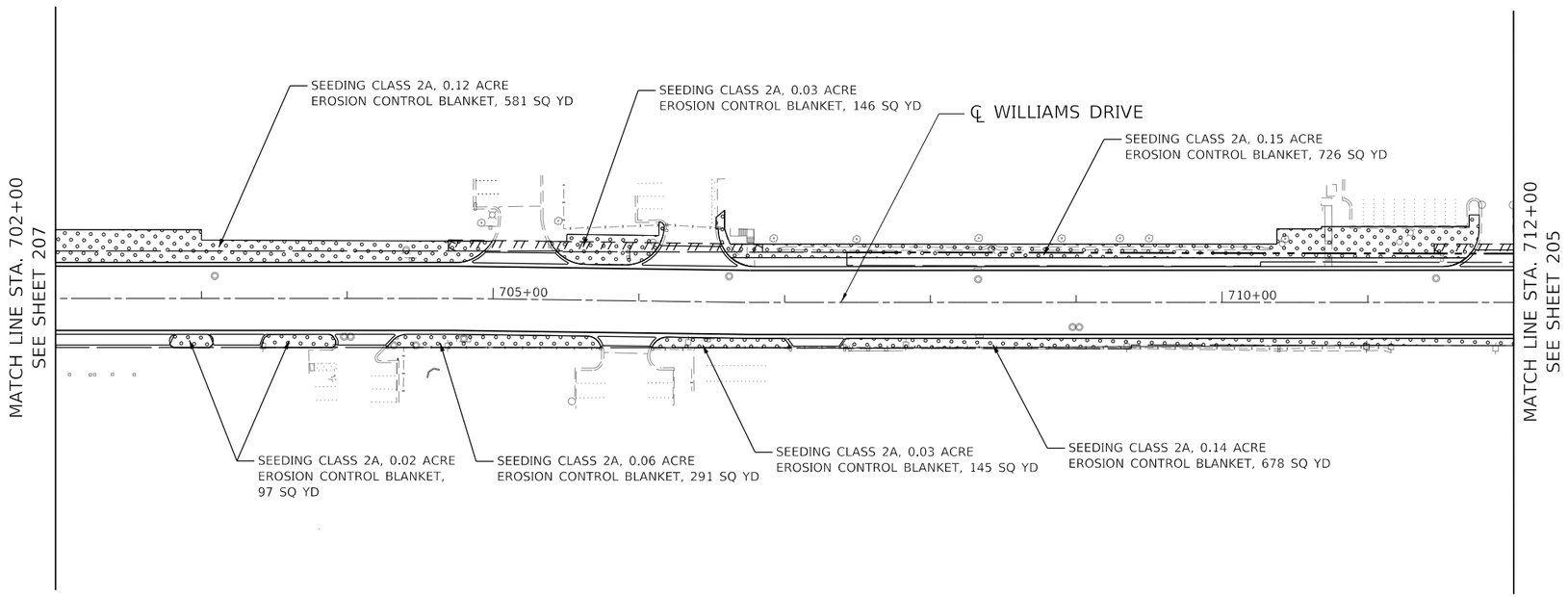

PROPOSED LANDSCAPING LEGEND

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SEEDING CLASS 4B (25000314) WITH
EROSION CONTROL BLANKET (25100630)

SEEDING CLASS 4A (25000312) WITH
EROSION CONTROL BLANKET (25100630)

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	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING

SCALE: 1"=50' | SHEET OF SHEETS | STA. 702+00 | TO STA. 712+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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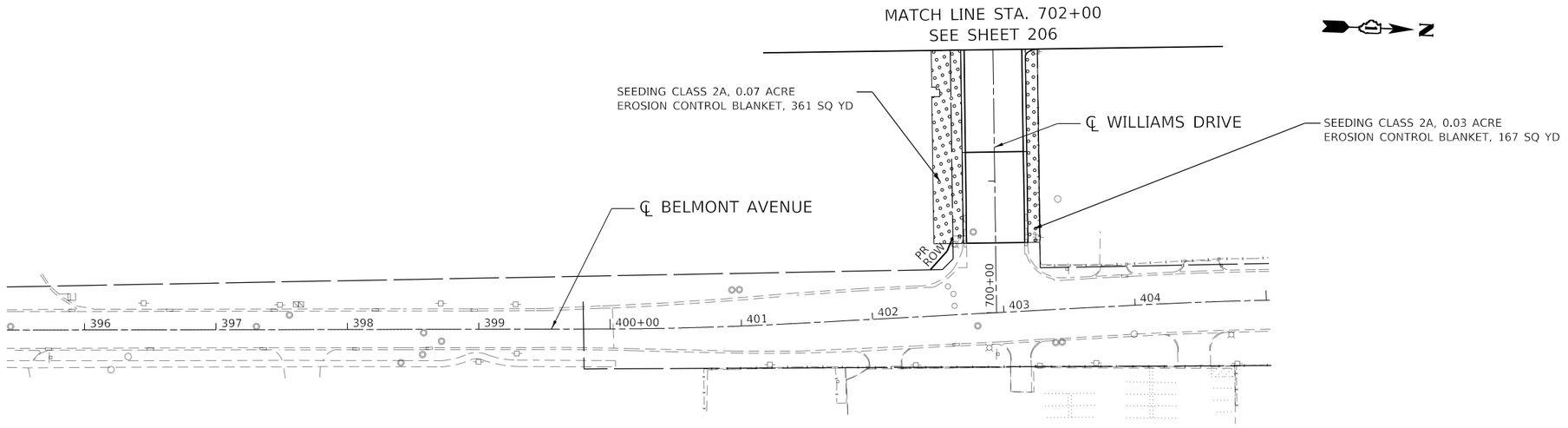
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		



PROPOSED LANDSCAPING LEGEND

SEEDING CLASS 2A (25000210) WITH
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SEEDING CLASS 4A (25000312) WITH
EROSION CONTROL BLANKET (25100630)

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	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -	

LANDSCAPING

SCALE: 1"=50' | SHEET OF SHEETS | STA. 397+42 | TO STA. 405+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	207
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

ITEM	EXISTING	PROPOSED
CONTROLLER CABINET		
COMMUNICATION CABINET	CC	CC
MASTER CONTROLLER	MC	MC
MASTER MASTER CONTROLLER	MMC	MMC
UNINTERRUPTABLE POWER SUPPLY		
SERVICE INSTALLATION -(P) POLE MOUNTED	P	P
SERVICE INSTALLATION -(G) GROUND MOUNTED -(GM) GROUND MOUNTED METERED	G GM	G GM
TELEPHONE CONNECTION	ET	T
STEEL MAST ARM ASSEMBLY AND POLE		
ALUMINUM MAST ARM ASSEMBLY AND POLE		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE		
SIGNAL POST -(BM) BARREL MOUNTED - TEMPORARY		BM
WOOD POLE		
GUY WIRE		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD OPTICALLY PROGRAMMED	P P	P P
FLASHER INSTALLATION -(FS) SOLAR POWERED	F FS F FS	F FS F FS
PEDESTRIAN SIGNAL HEAD		
PEDESTRIAN PUSH BUTTON -(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON	APS	APS
RADAR DETECTION SENSOR	R	R
VIDEO DETECTION CAMERA	V	V
RADAR/VIDEO DETECTION ZONE		
PAN, TILT, ZOOM (PTZ) CAMERA	PTZ	PTZ
EMERGENCY VEHICLE LIGHT DETECTOR		
CONFIMATION BEACON		
WIRELESS INTERCONNECT		
WIRELESS INTERCONNECT RADIO REPEATER	ERR	RR

ITEM	EXISTING	PROPOSED
HANDHOLE -SQUARE -ROUND		
HEAVY DUTY HANDHOLE -SQUARE -ROUND	H	H
DOUBLE HANDHOLE		
JUNCTION BOX		
RAILROAD CANTILEVER MAST ARM		
RAILROAD FLASHING SIGNAL		
RAILROAD CROSSING GATE		
RAILROAD CROSSBUCK		
RAILROAD CONTROLLER CABINET		
UNDERGROUND CONDUIT (UC), GALVANIZED STEEL		
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE		
SYSTEM ITEM	S	SP
INTERSECTION ITEM	I	IP
REMOVE ITEM		R
RELOCATE ITEM		RL
ABANDON ITEM		A
CONTROLLER CABINET AND FOUNDATION TO BE REMOVED		RCF
MAST ARM POLE AND FOUNDATION TO BE REMOVED		RMF
SIGNAL POST AND FOUNDATION TO BE REMOVED		RPF
DETECTOR LOOP, TYPE I		
PREFORMED DETECTOR LOOP	P P	P P
SAMPLING (SYSTEM) DETECTOR	S S	S S
INTERSECTION AND SAMPLING (SYSTEM) DETECTOR	IS IS	IS IS
QUEUE AND SAMPLING (SYSTEM) DETECTOR	QS QS	QS QS
WIRELESS DETECTOR SENSOR	W	W
WIRELESS ACCESS POINT		

ITEM	EXISTING	PROPOSED
SIGNAL HEAD -(P) PROGRAMMABLE SIGNAL HEAD	P	P
SIGNAL HEAD WITH BACKPLATE -(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE	P RB	P RB
PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS		
PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER	C D	C D
ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"		
NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED	5	5
GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)	1#6	1#6
ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C	1	1
COAXIAL CABLE	C	C
VENDOR CABLE	V	V
COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED	6#18	6#18
FIBER OPTIC CABLE -NO. 62.5/125, MM12F -NO. 62.5/125, MM12F SM12F -NO. 62.5/125, MM12F SM24F	12F 24F 36F	12F 24F 36F
GROUND ROD -(C) CONTROLLER -(M) MAST ARM -(P) POST -(S) SERVICE	C M P S	C M P S

TS SHT NO. 1

FILE NAME = E:\DGNFiles\Legend_06-08-16.dgn	USER NAME = plascencia	DESIGNED - IP	REVISED -
DELTA ENGINEERING GROUP		DRAWN - IP	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - LP	REVISED -
	PLOT DATE = 6/10/2016	DATE - 6/8/2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 1 OF 7 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	208
	TS-05	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

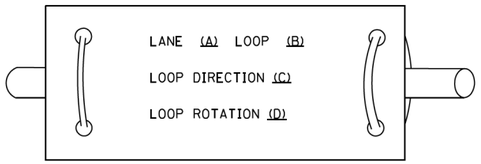
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

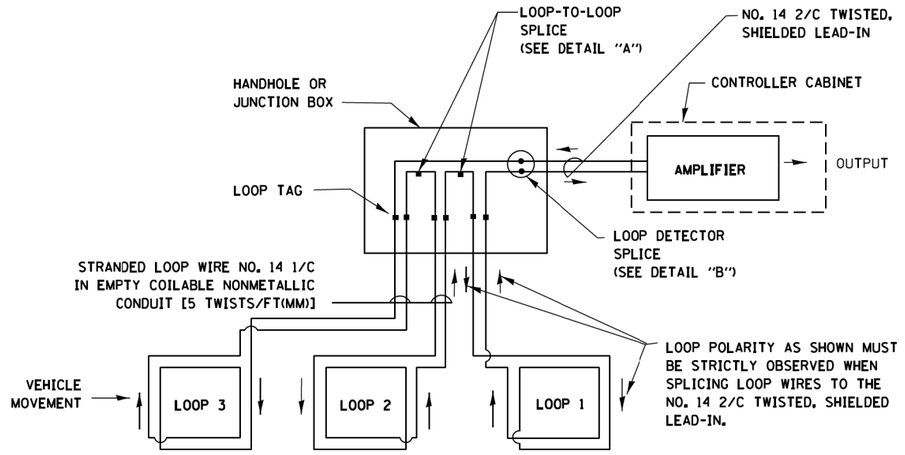


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

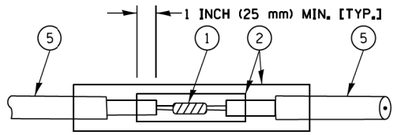
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

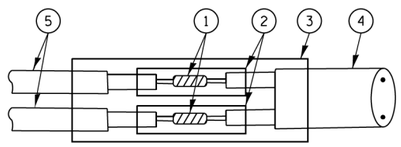


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

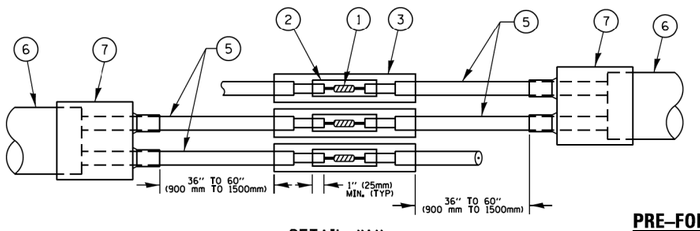


DETAIL "A"
LOOP-TO-LOOP SPLICE



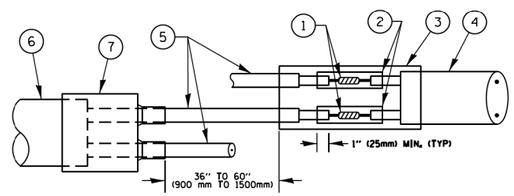
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE

PRE-FORMED LOOP



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

(1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.

(2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.

(3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

(6) PRE-FORMED LOOP

(7) XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

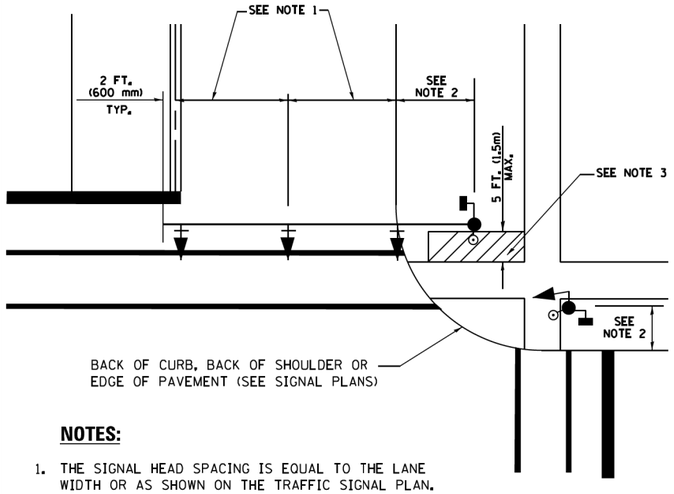
TS SHT NO. 2

FILE NAME = TSExample01-sht-ts.dgn	USER NAME = plascencia	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS		
DELTA ENGINEERING GROUP		DRAWN -	REVISED -				
	PLOT SCALE = 100.0000 '/ in.	CHECKED -	REVISED -		SCALE: NONE	SHEET 2 OF 7 SHEETS	STA. TO STA.
	PLOT DATE = 5/17/2016	DATE -	REVISED -				

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	209
	TS-05	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

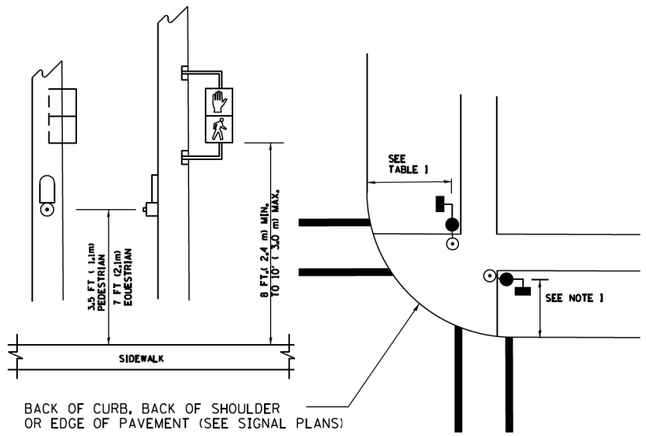
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

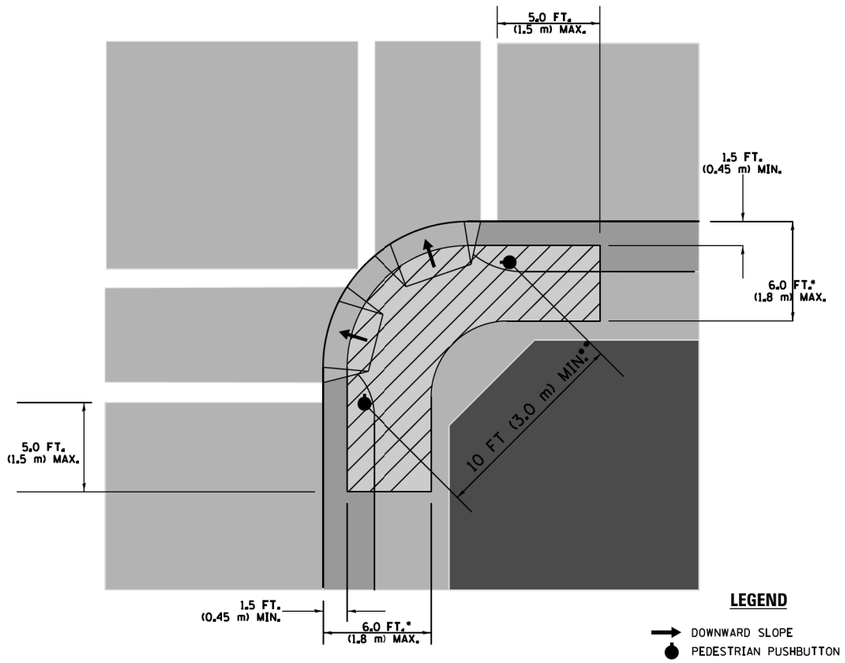
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

RECOMMENDED PUSHBUTTON LOCATIONS



- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

** WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

TRAFFIC SIGNAL EQUIPMENT OFFSET

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

NOTES:

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TOTHE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

TS SHT NO. 3

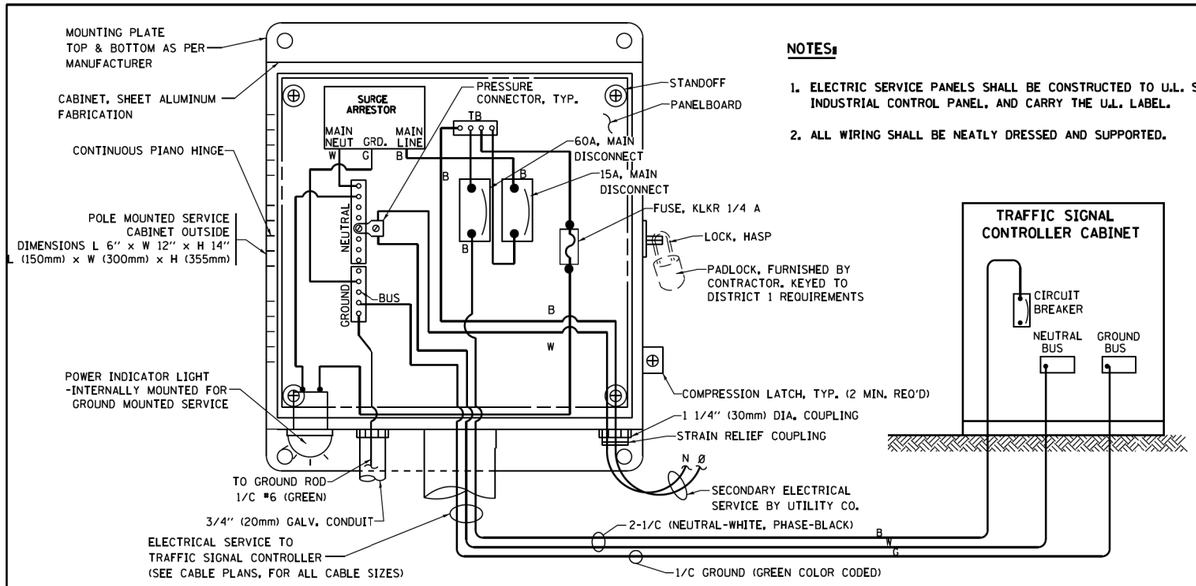
FILE NAME =	USER NAME = plascencia	DESIGNED -	REVISED -
DELTA ENGINEERING GROUP	TSExample01-sht-ts.dgn	DRAWN -	REVISED -
	PLOT SCALE = 100.0000 '/ in.	CHECKED -	REVISED -
	PLOT DATE = 5/17/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 3 OF 7 SHEETS | STA. | TO STA.

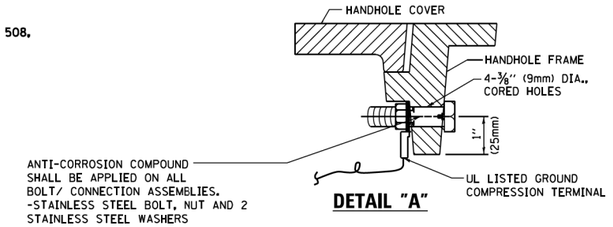
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	210
	TS-05	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			



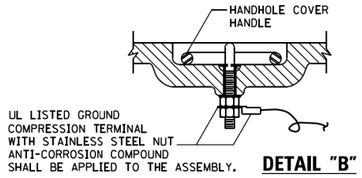
NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
(NOT TO SCALE)



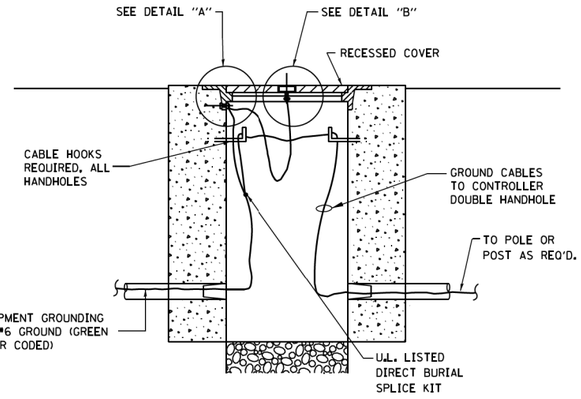
DETAIL "A"



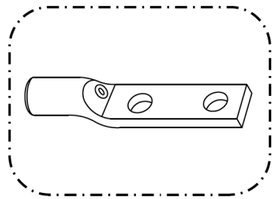
DETAIL "B"

NOTES:
GROUNDING SYSTEM

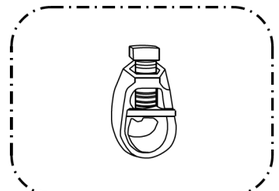
1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



HANDHOLE COVER & FRAME – GROUNDING DETAIL
(NOT TO SCALE)



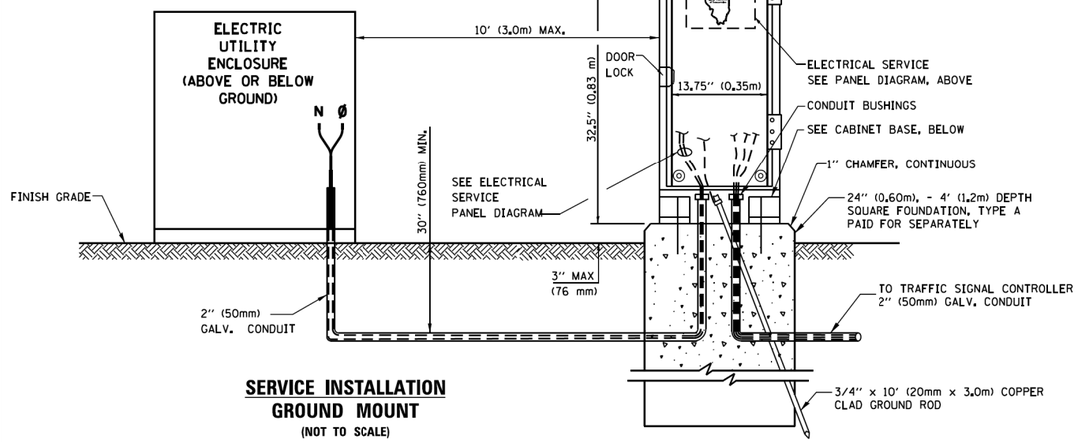
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



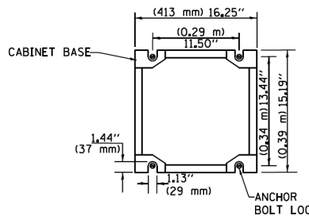
¾" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

NOTES:

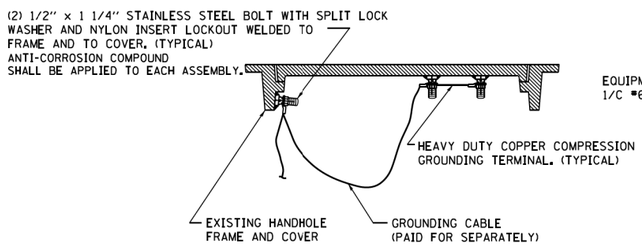
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



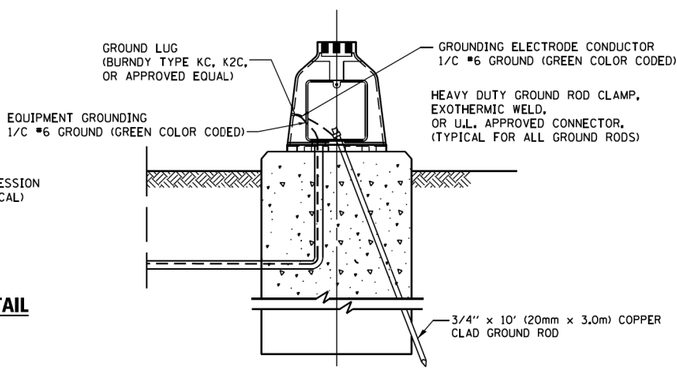
SERVICE INSTALLATION GROUND MOUNT
(NOT TO SCALE)



CABINET – BASE BOLT PATTERN
(NOT TO SCALE)



EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL
(NOT TO SCALE)



MAST ARM POLE / POST–GROUNDING DETAIL
(NOT TO SCALE)

TS SHT NO. 4

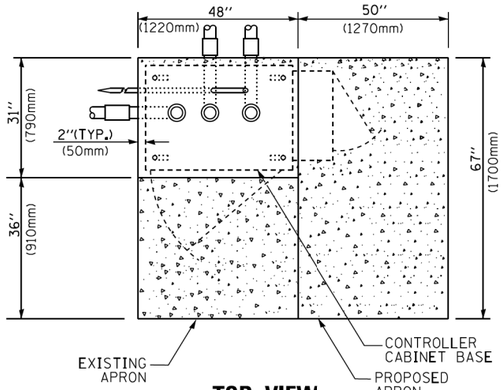
FILE NAME = TSExample01-sht-ts.dgn	USER NAME = plascencia	DESIGNED -	REVISED -
DELTA ENGINEERING GROUP	PLOT SCALE = 100.0000 ' / in.	DRAWN -	REVISED -
	PLOT DATE = 5/17/2016	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

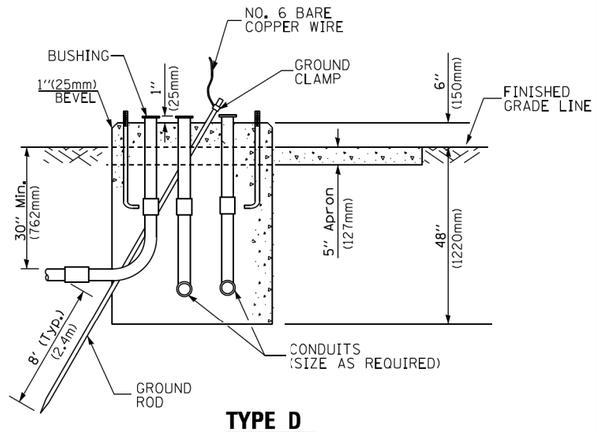
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 4 OF 7 SHEETS | STA. | TO STA.

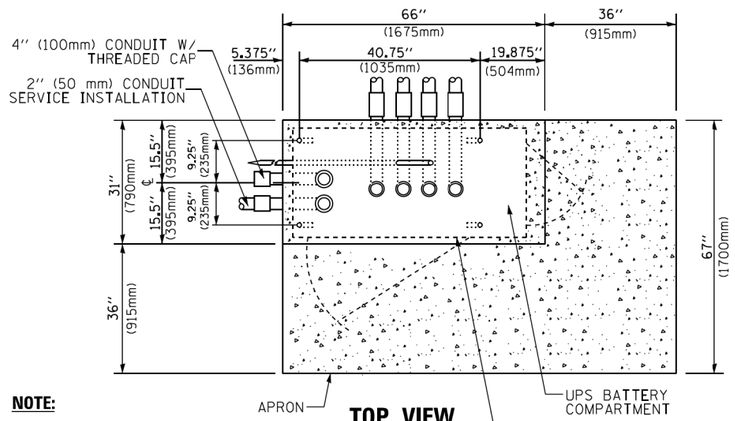
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	211
	TS-05	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			



TOP VIEW



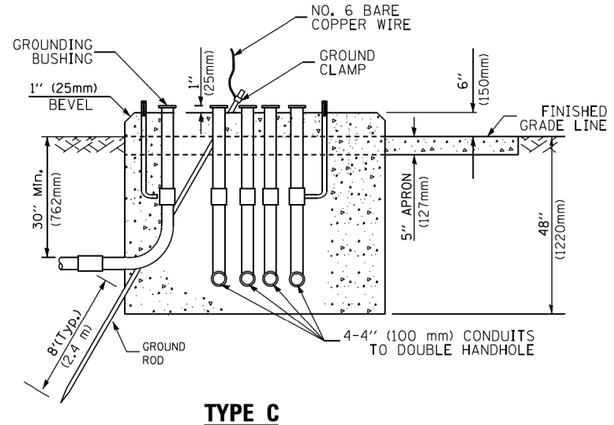
TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



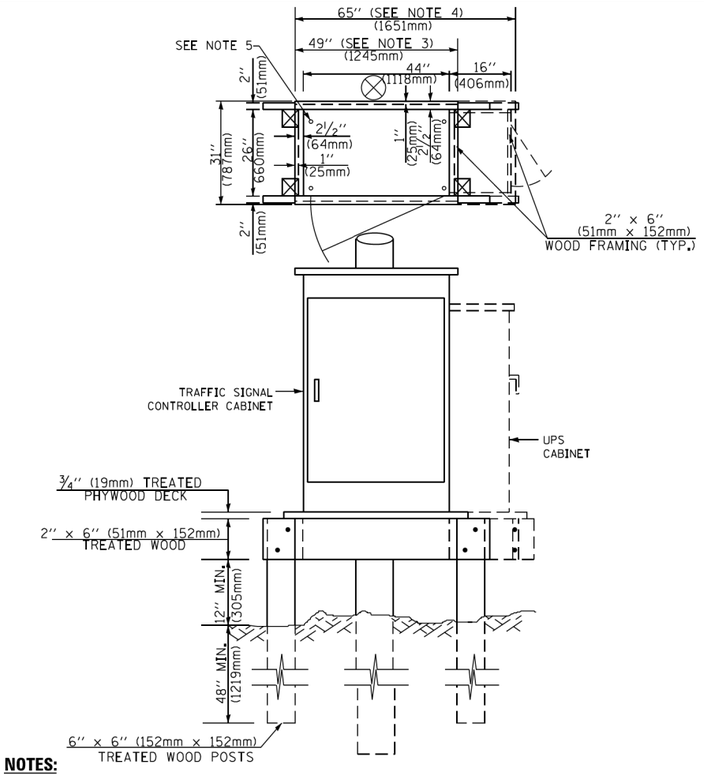
NOTE:

TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE

TOP VIEW



TYPE C
FOR GROUND MOUNTED
SUPER P (TYPE IV) AND SUPER R (TYPE V)
CONTROLLER CABINETS



NOTES:

1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26'' x 44'' (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16'' x 25'' (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION..

TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0'' (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0'' (1.2m)
TYPE D - CONTROLLER	4'-0'' (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0'' (1.2m)

DEPTH OF FOUNDATION

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0'' (3.0 m)	30'' (750mm)	24'' (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6'' (4.1 m)	30'' (750mm)	24'' (600mm)	8	6(19)
	11'-0'' (3.4 m)	36'' (900mm)	30'' (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0'' (4.0 m)	36'' (900mm)	30'' (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0'' (4.6 m)	36'' (900mm)	30'' (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0'' (6.4 m)	42'' (1060mm)	36'' (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0'' (7.6 m)	42'' (1060mm)	36'' (900mm)	16	8(25)

NOTES:

1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & structures should be contacted for a revised design if other conditions are encountered.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36'' (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42'' (1060 mm) diameter foundations
4. For mast arm assemblies with dual arms refer to state standard 878001..

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

TS SHT NO. 5

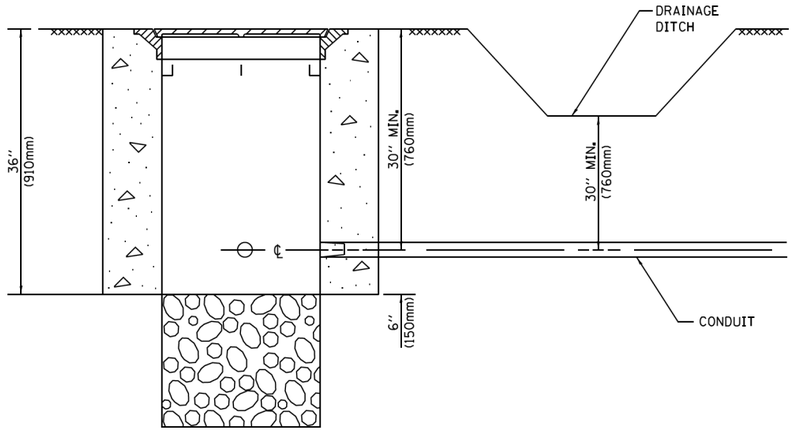
FILE NAME =	USER NAME = plascencia	DESIGNED -	REVISED -
DELTA ENGINEERING GROUP	TSExample@1-sht-ts.dgn	DRAWN -	REVISED -
	PLOT SCALE = 100.0000 '/ in.	CHECKED -	REVISED -
	PLOT DATE = 5/17/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 5 OF 7 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	212
	TS-05	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

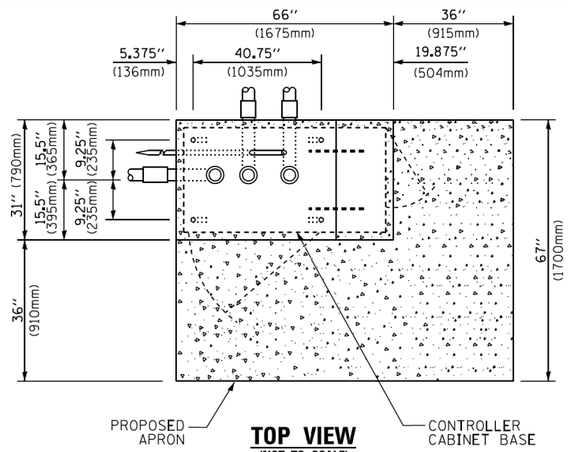


NOTES:

1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

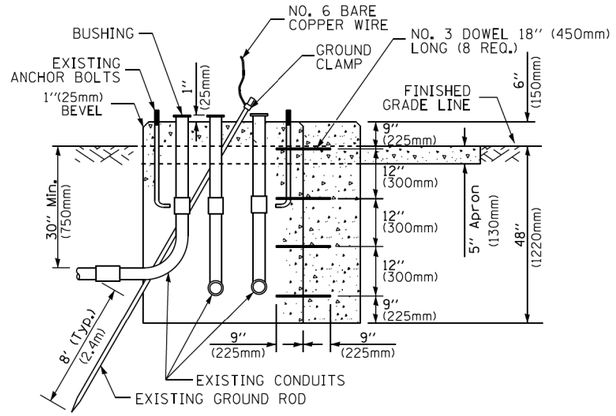
HANDHOLE WITH MINIMUM CONDUIT DEPTH

(NOT TO SCALE)



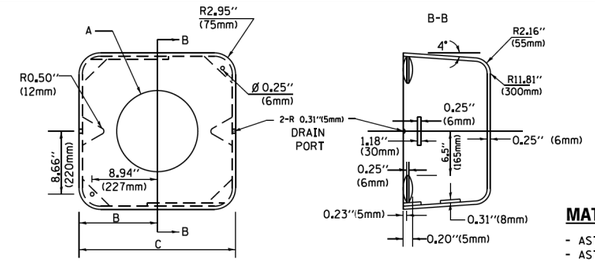
TOP VIEW

(NOT TO SCALE)



MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION

(NOT TO SCALE)



MATERIAL:

- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

A	B	C	HEIGHT	WEIGHT
VARIES	9.5"(241mm)	19"(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5"(470mm)	37"(940mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

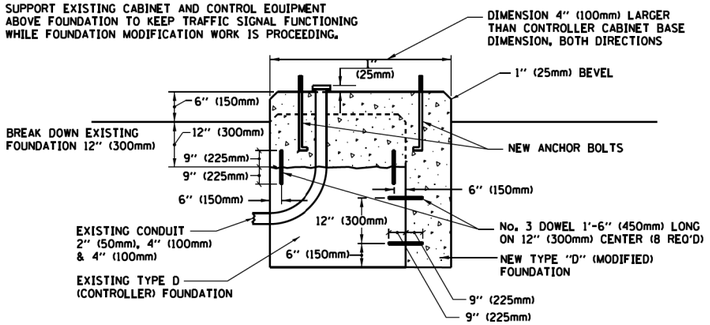
SHROUD

NOTES:

1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

NOTE:

SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION

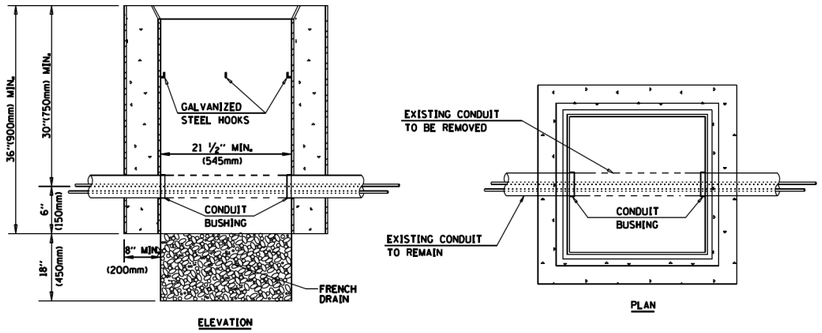
POST CAP MOUNT **MAST ARM MOUNT**

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	¾"(19 mm) CLOSE NIPPLE
7	¾"(19 mm) LOCKNUT
8	¾"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
   ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
   ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4 "(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



NOTES:

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT

TS SHT NO. 6

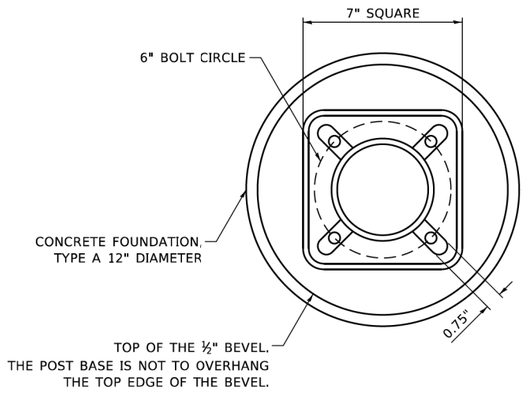
FILE NAME =	USER NAME = plascencia	DESIGNED -	REVISED -
DELTA ENGINEERING GROUP	TSExample01-sht-ts.dgn	DRAWN -	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 5/17/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 6 OF 7 SHEETS | STA. | TO STA.

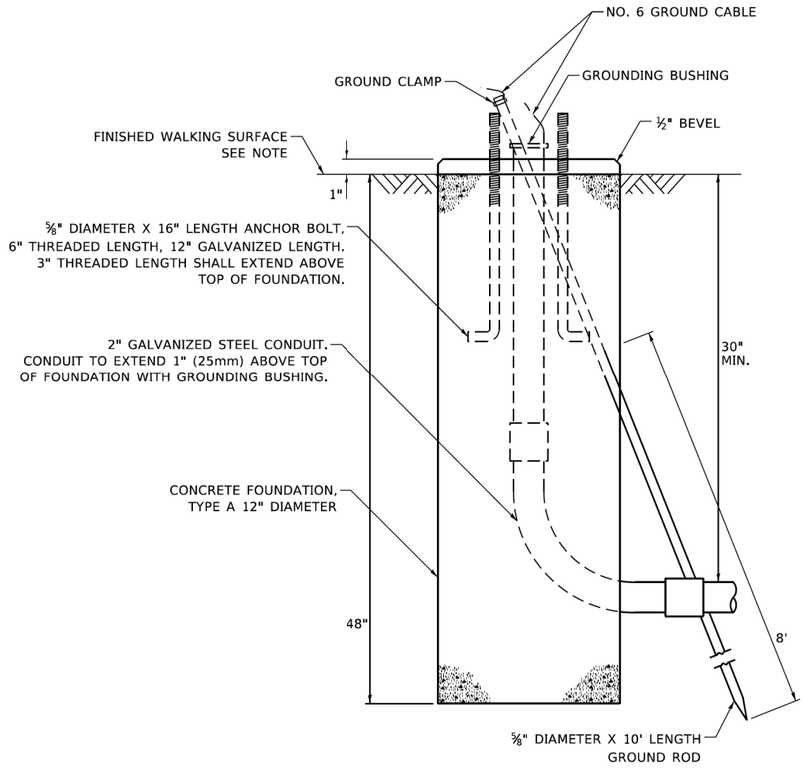
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	213
	TS-05	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			



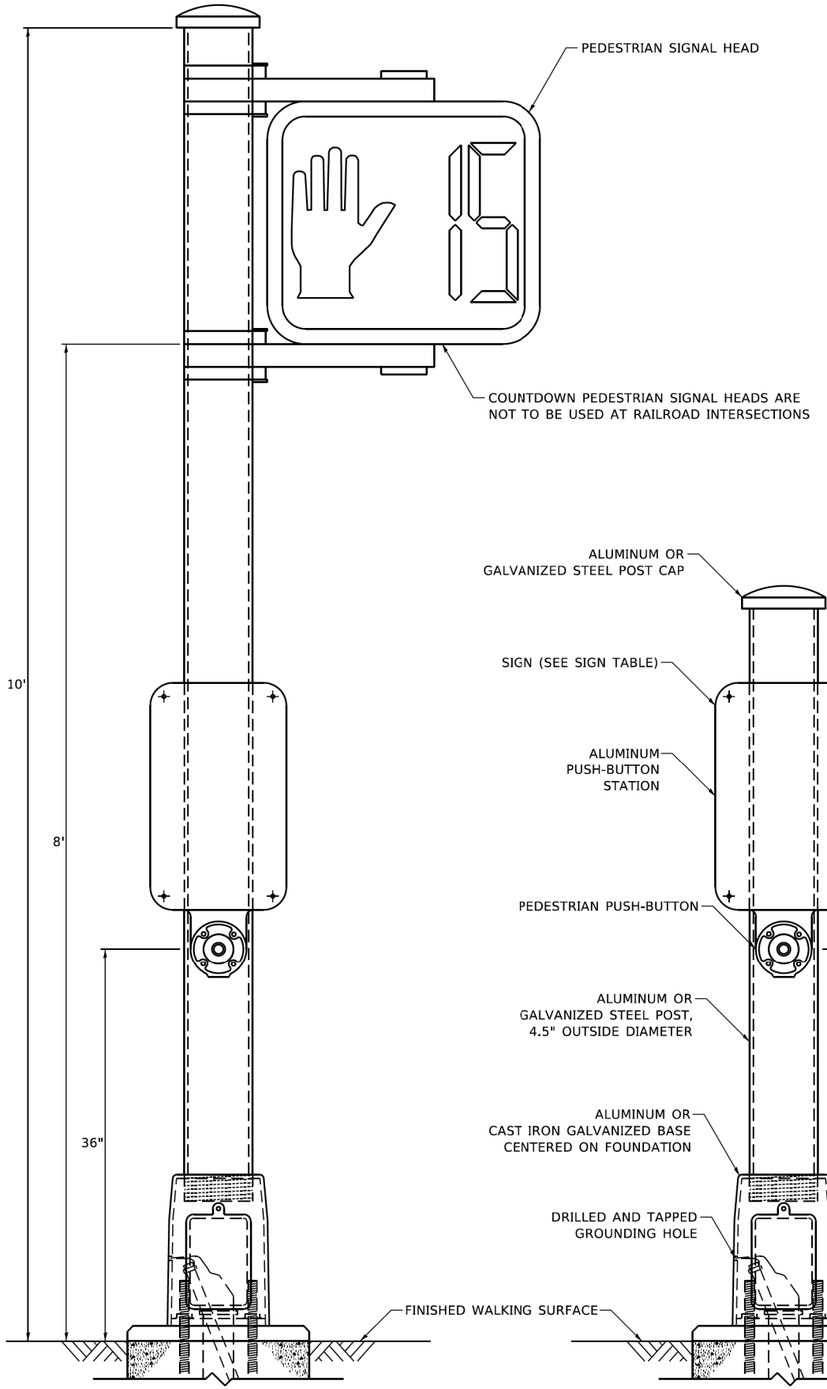
BOLT PATTERN

NOTE:

1. IF THE PEDESTRIAN SIGNAL POST FOUNDATION IS INSTALLED WITHIN OR BEHIND A BARRIER CURB, THE TOP OF THE FOUNDATION SHALL BE INSTALLED FLUSH WITH THE TOP OF THE BARRIER CURB.



CONCRETE FOUNDATION, TYPE A 12–INCH DIAMETER

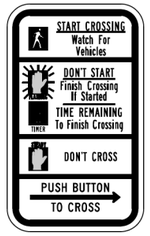


PEDESTRIAN SIGNAL POST, 10 FT.

PEDESTRIAN SIGNAL POST, 5 FT.

R10-3b

R10-3d



R10-3e

SIGN TABLE

SIGN	DIMENSIONS
R10-3b (RAILROAD ONLY)	9" X 12"
R10-3d (RAILROAD ONLY)	9" X 12"
R10-3e	9" X 15"

NOTES:

1. THE SIGN PANELS SHALL BE TYPE AP SHEETING.
2. THE ARROW ON SIGNS FOR PUSH-BUTTONS SERVING TWO DIRECTIONS ON THE SAME PHASE SHALL BE BI-DIRECTIONAL.
3. THE SIGN FOR DUAL-CALL PUSH-BUTTONS SHALL HAVE NO ARROW.

MODEL: Default
FILE NAME: S:\WP\Design\Jovan\11 Other\PedestrianPost\PedestrianSignalPost_Working\File-DO-NOT-USE.dgn

DELTA ENGINEERING GROUP

USER NAME = plascencial	DESIGNED - IP	REVISED - 10/15/2020	
	DRAWN - IP	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED - LP	REVISED -	
PLOT DATE = 11/17/2020	DATE - 10/15/2018	REVISED -	

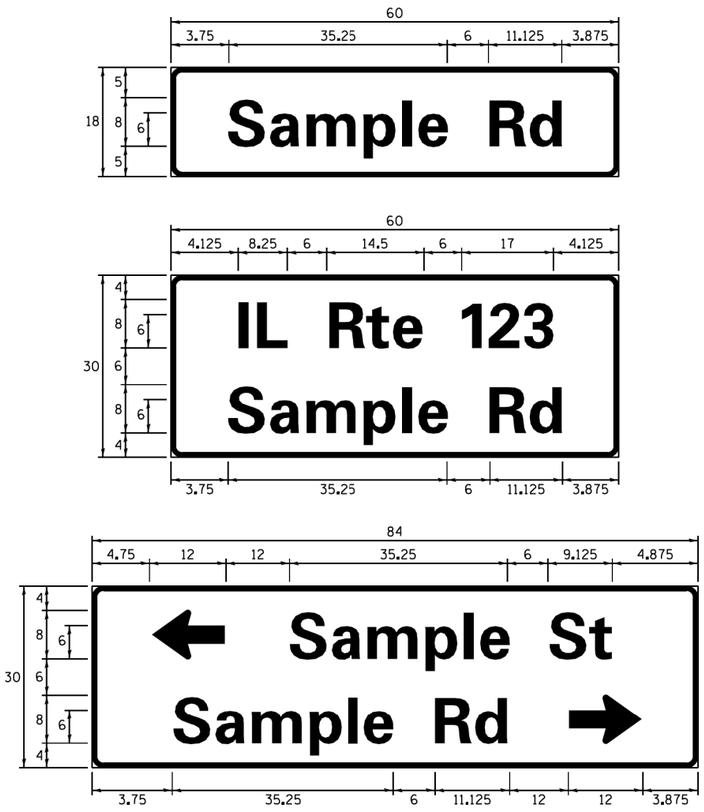
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NTS | SHEET NO. 7 OF 7 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV		421	214
	TS–05		CONTRACT NO. 61H14	
	ILLINOIS FED. AID PROJECT			

SIGN PANEL – TYPE 1 OR TYPE 2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D OR C	-	1 OR 2	ZZ	-

ALL DIMENSIONS ARE IN INCHES EXCEPT NOTED OTHERWISE

COMMON STREET NAME ABBREVIATIONS AND WIDTHS

NAME	ABBREVATION	WIDTH (INCH)	
		SERIES "C"	SERIES "D"
AVENUE	Ave	15.000	18.250
BOULEVARD	Blvd	17.125	20.000
CIRCLE	Cir	11.125	13.000
COURT	Ct	8.250	9.625
DRIVE	Dr	8.625	10.125
HIGHWAY	Hwy	18.375	22.000
ILLINOIS	IL	7.000	8.250
LANE	Ln	9.125	10.750
PARKWAY	Pkwy	23.375	27.375
PLACE	Pl	7.125	7.750
ROAD	Rd	9.625	11.125
ROUTE	Rte	12.625	14.500
STREET	St	8.000	9.125
TERRACE	Ter	12.625	14.625
TRAIL	Tr	7.750	9.125
UNITED STATES	US	10.375	12.250

GENERAL NOTES

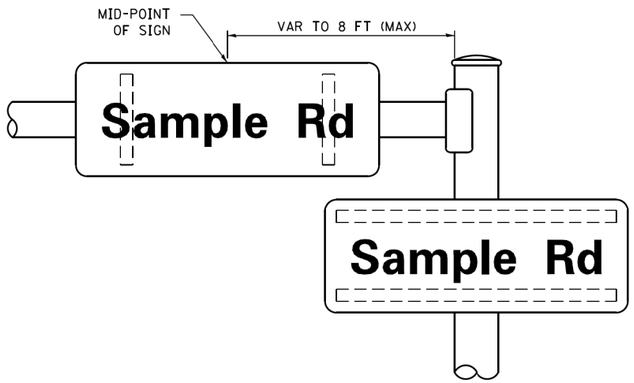
1. WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 877001, 877002, 877006, 877011 AND 877012, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 8'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
2. ALL SIGNS SHALL CONSIST OF A WHITE LEGEND AND BORDER (TYPE ZZ SHEETING) ON A GREEN BACKGROUND (TYPE ZZ SHEETING)
3. THE SIGN LENGTH SHALL BE IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHALL NOT EXCEED 8'-0". ALL BORDERS SHALL BE ¾" WIDE. CORNER RADIUS SHALL BE 1-7/8". THE SPACING BETWEEN THE WORDS SHOULD BE 6", IF POSSIBLE, BUT MAY BE REDUCED TO 5" WHEN SPACING IS CRITICAL. A MINIMUM OF 2-1/2" SHALL BE INCLUDED BETWEEN THE WORD AND THE RIGHT AND LEFT EDGES OF THE SIGN.
4. A PREFERRED METHOD FOR THE SIGN DESIGN IS TO USE SERIES "D" LETTER ON A ONE-LINE SIGN 18" IN HEIGHT AND A MAXIMUM OF 8'-0" IN WIDTH. IF SERIES "D" DOES NOT FIT ON A 8"-0" SIGN, THEN SERIES "C" SHOULD BE TRIED. IF SERIES "C" DOES NOT FIT ON A 8'-0" SIGN, A 30" HIGH TWO-LINE SIGN CAN BE USED. THE CROSSROAD DESIGNATION AS TO STREET, AVENUE, ETC. SHOULD BE SPELLED OUT ON THE SECOND LINE, IF THE ABBREVIATION CANNOT FIT ON THE FIRST LINE.
5. LED ILLUMINATED STREET NAME SIGNS CAN BE USED IN PLACE OF REGULAR SIGN PANELS BUT ANY SPECIAL WORDING AND SYMBOLOGY MUST BE APPROVED BY THE DEPARTMENT. GENERAL DESIGN REQUIREMENT AS LISTED ABOVE (COLOR, FONT, SIZE, ETC.) MUST BE FOLLOWED.
6. SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS.

LOCAL SUPPLIERS:	PARTS LISTING:	
- J.O. HERBERT COMPANY, INC MIDLOTHIAN, VA	SIGN CHANNEL	PART #HPN053 (MED. CHANNEL)
	SIGN SCREWS	1/4" x 14 x 1" H.W.H. #3 SELF TAPPING WITH NEOPRENE WASHER
- WESTERN REMAC, INC. WOODRIDGE, IL	BRACKETS	PART #HPN034 (UNIVERSAL) CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

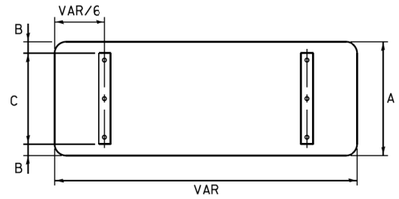
OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BRACKET OF THE ABOVE PRODUCT.

MOUNTING LOCATION

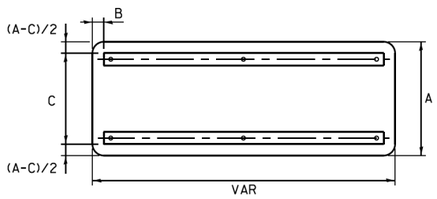
ARM OR POLE MOUNTED



SUPPORTING CHANNELS



A	B	C
18"	2"	14"
30"	2"	24"



A	B	C
18"	2"	12"
30"	2"	22"

STANDARD ALPHABETS SPACING CHART

(8") UPPER CASE AND (6") LOWER CASE

FHWA SERIES "C"				FHWA SERIES "D"			
CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)	CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)
A	0.240	5.122	0.240	A	0.240	6.804	0.240
B	0.880	4.482	0.480	B	0.960	5.446	0.400
C	0.720	4.482	0.720	C	0.800	5.446	0.800
D	0.880	4.482	0.720	D	0.960	5.446	0.800
E	0.880	4.082	0.480	E	0.960	4.962	0.400
F	0.880	4.082	0.240	F	0.960	4.962	0.240
G	0.720	4.482	0.720	G	0.800	5.446	0.800
H	0.880	4.482	0.880	H	0.960	5.446	0.960
I	0.880	1.120	0.880	I	0.960	1.280	0.960
J	0.240	4.082	0.880	J	0.240	5.122	0.960
K	0.880	4.482	0.480	K	0.960	5.604	0.400
L	0.880	4.082	0.240	L	0.960	4.962	0.240
M	0.880	5.284	0.880	M	0.960	6.244	0.960
N	0.880	4.482	0.880	N	0.960	5.446	0.960
O	0.720	4.722	0.720	O	0.800	5.684	0.800
P	0.880	4.482	0.720	P	0.960	5.446	0.240
Q	0.720	4.722	0.720	Q	0.800	5.684	0.800
R	0.880	4.482	0.480	R	0.960	5.446	0.400
S	0.480	4.482	0.480	S	0.400	5.446	0.400
T	0.240	4.082	0.240	T	0.240	4.962	0.240
U	0.880	4.482	0.880	U	0.960	5.446	0.960
V	0.240	4.962	0.240	V	0.240	6.084	0.240
W	0.240	6.084	0.240	W	0.240	7.124	0.240
X	0.240	4.722	0.240	X	0.400	5.446	0.400
Y	0.240	5.122	0.240	Y	0.240	6.884	0.240
Z	0.480	4.482	0.480	Z	0.400	5.446	0.400
a	0.320	3.842	0.640	a	0.400	4.562	0.720
b	0.720	4.082	0.480	b	0.800	4.802	0.480
c	0.480	4.002	0.240	c	0.480	4.722	0.240
d	0.480	4.082	0.720	d	0.480	4.802	0.800
e	0.480	4.082	0.320	e	0.480	4.722	0.320
f	0.320	2.480	0.160	f	0.320	2.882	0.160
g	0.480	4.082	0.720	g	0.480	4.802	0.800
h	0.720	4.082	0.640	h	0.800	4.722	0.720
i	0.720	1.120	0.720	i	0.800	1.280	0.800
j	0.000	2.320	0.720	j	0.000	2.642	0.800
k	0.720	4.322	0.160	k	0.800	5.122	0.160
l	0.720	1.120	0.720	l	0.800	1.280	0.800
m	0.720	6.724	0.640	m	0.800	7.926	0.720
n	0.720	4.082	0.640	n	0.800	4.722	0.720
o	0.480	4.082	0.480	o	0.480	4.882	0.480
p	0.720	4.082	0.480	p	0.800	4.802	0.480
q	0.480	4.082	0.720	q	0.480	4.802	0.800
r	0.720	2.642	0.160	r	0.800	3.042	0.160
s	0.320	3.362	0.240	s	0.320	3.762	0.240
t	0.080	2.882	0.080	t	0.080	3.202	0.080
u	0.640	4.082	0.720	u	0.720	4.722	0.800
v	0.160	4.722	0.160	v	0.160	5.684	0.160
w	0.160	7.524	0.160	w	0.160	9.046	0.160
x	0.000	5.202	0.000	x	0.000	6.244	0.000
y	0.160	4.962	0.160	y	0.160	6.004	0.160
z	0.240	3.362	0.240	z	0.240	4.002	0.240
1	0.720	1.680	0.880	1	0.800	2.000	0.960
2	0.480	4.482	0.480	2	0.800	5.446	0.800
3	0.480	4.482	0.480	3	1.440	5.446	0.800
4	0.240	4.962	0.720	4	0.160	6.004	0.960
5	0.480	4.482	0.480	5	0.800	5.446	0.800
6	0.720	4.482	0.720	6	0.800	5.446	0.800
7	0.240	4.482	0.720	7	0.560	5.446	0.560
8	0.480	4.482	0.480	8	0.800	5.446	0.800
9	0.480	4.482	0.480	9	0.800	5.446	0.800
0	0.720	4.722	0.720	0	0.800	5.684	0.800
-	0.240	2.802	0.240	-	0.240	2.802	0.240

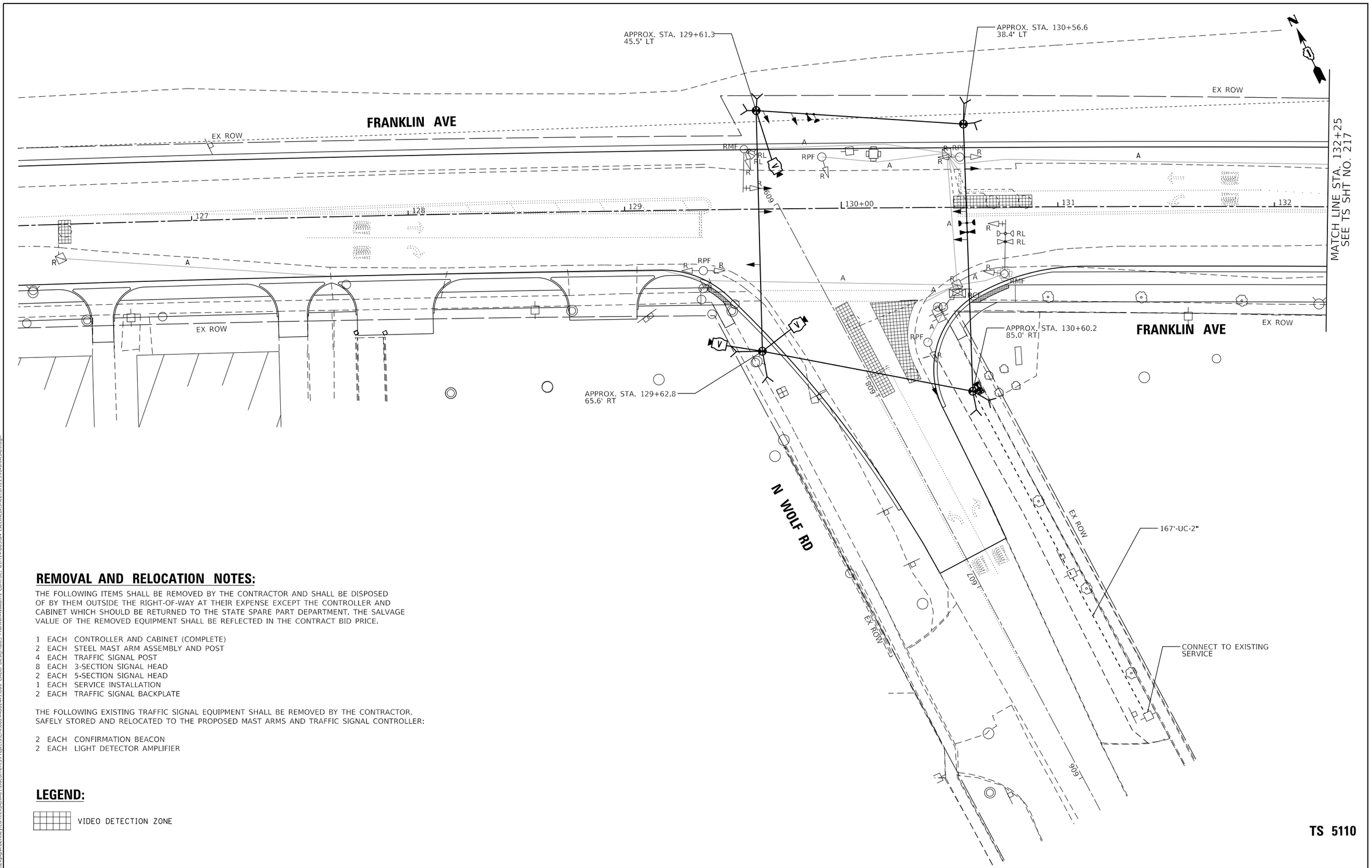
TS SHT NO. 8

FILE NAME = TSExample01-sht-ts.dgn	USER NAME = plascencia	DESIGNED - LP/IP	REVISED - LP 07/01/2015	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
DELTA ENGINEERING GROUP		DRAWN - LP	REVISED -	
PLOT SCALE = 100.0000 '/ in.		CHECKED - IP	REVISED -	
PLOT DATE = 5/17/2016		DATE - 10/01/2014	REVISED -	

DISTRICT ONE
MAST ARM MOUNTED STREET NAME SIGNS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	215
	TS-02	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			



REMOVAL AND RELOCATION NOTES:

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE EXCEPT THE CONTROLLER AND CABINET WHICH SHOULD BE RETURNED TO THE STATE SPARE PART DEPARTMENT. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONTROLLER AND CABINET (COMPLETE)
2 EACH STEEL MAST ARM ASSEMBLY AND POST
4 EACH TRAFFIC SIGNAL POST
8 EACH 3-SECTION SIGNAL HEAD
2 EACH 5-SECTION SIGNAL HEAD
1 EACH SERVICE INSTALLATION
2 EACH TRAFFIC SIGNAL BACKPLATE

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SAFELY STORED AND RELOCATED TO THE PROPOSED MAST ARMS AND TRAFFIC SIGNAL CONTROLLER:

2 EACH CONFIRMATION BEACON
2 EACH LIGHT DETECTOR AMPLIFIER

LEGEND:

VIDEO DETECTION ZONE

TS 5110

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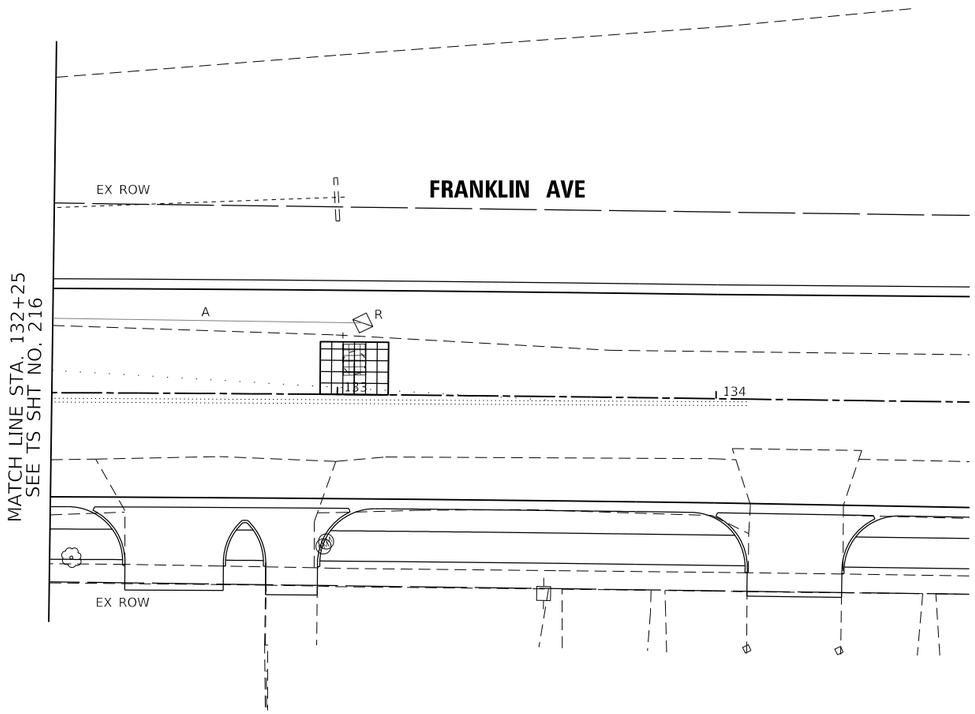
DELTA ENGINEERING GROUP		DRAWN - RM/NS	REVISED -	
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MA	REVISED -	
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -	

TEMP TRAFFIC SIGNAL INSTALLATION & REMOVE EXIST TRAFFIC SIGNAL EQUIPMENT PLAN (SHEET 1 OF 2) FRANKLIN AVE & WOLF RD

SCALE: 1"=20' | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	216
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		



LEGEND:

- VIDEO DETECTION ZONE

TS 5110

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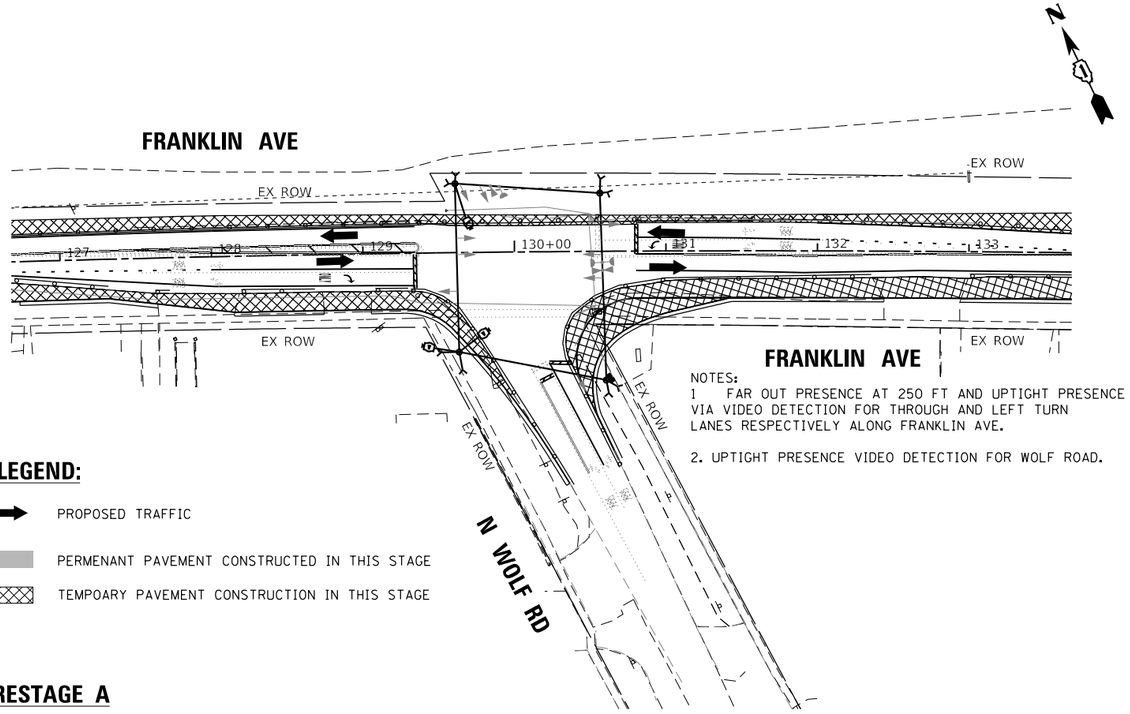
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

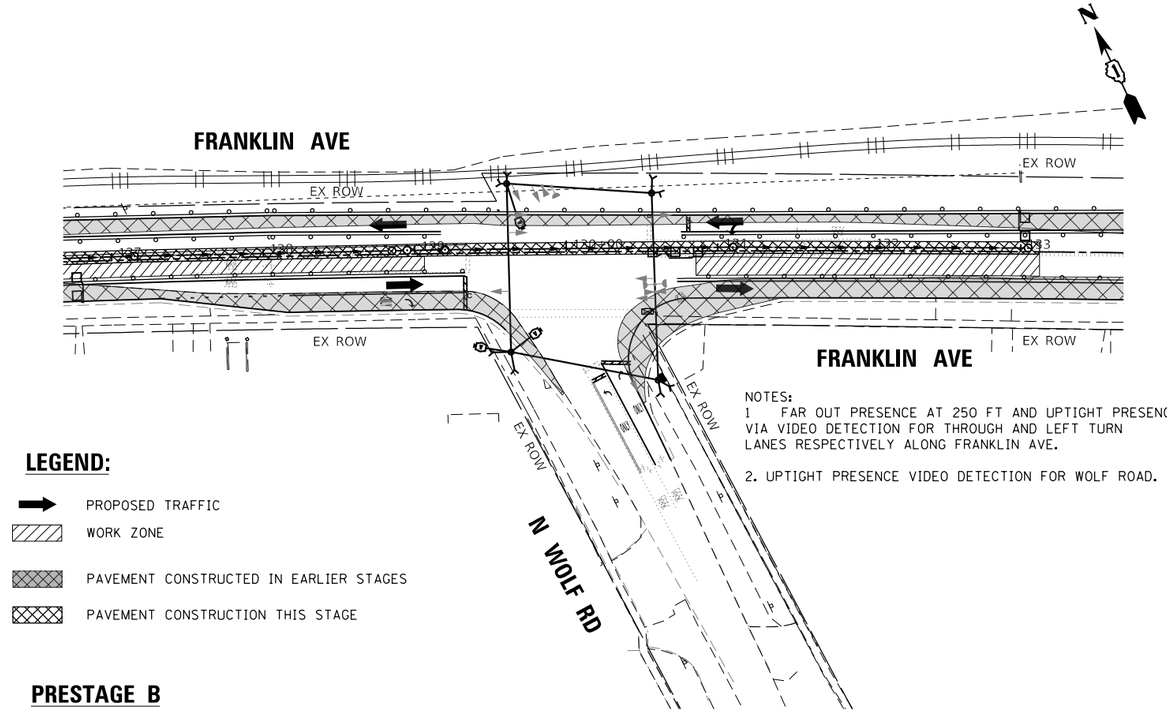
TEMP TRAFFIC SIGNAL INSTALLATION & REMOVE EXIST TRAFFIC SIGNAL EQUIPMENT PLAN (SHEET 2 OF 2) FRANKLIN AVE & WOLF RD

SCALE: 1"=20' | SHEET OF SHEETS | STA. | TO STA.

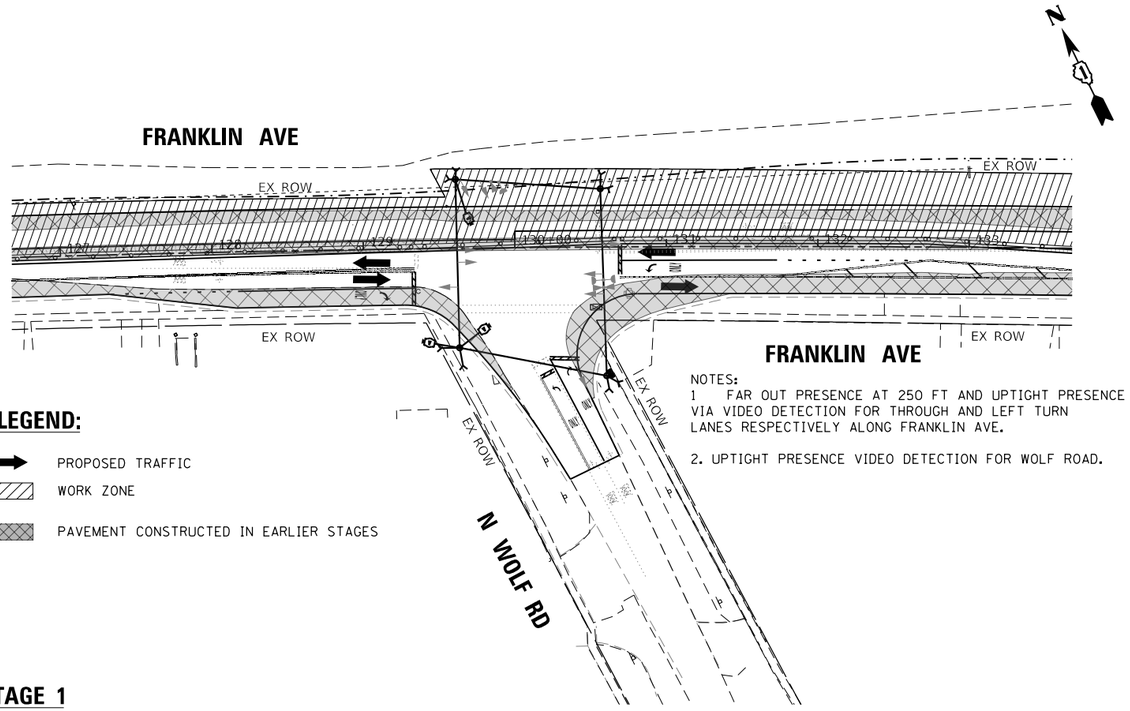
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	217
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		



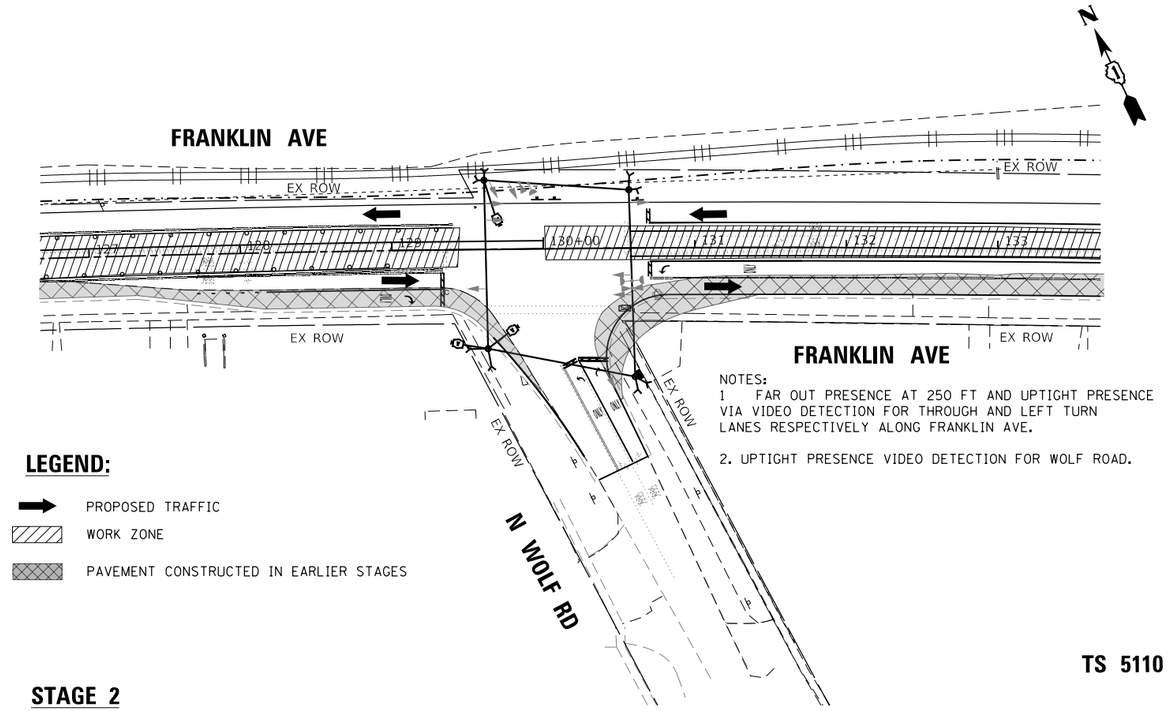
PRESTAGE A



PRESTAGE B



STAGE 1



STAGE 2

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DELTA ENGINEERING GROUP		DRAWN - RM/NS	REVISED -
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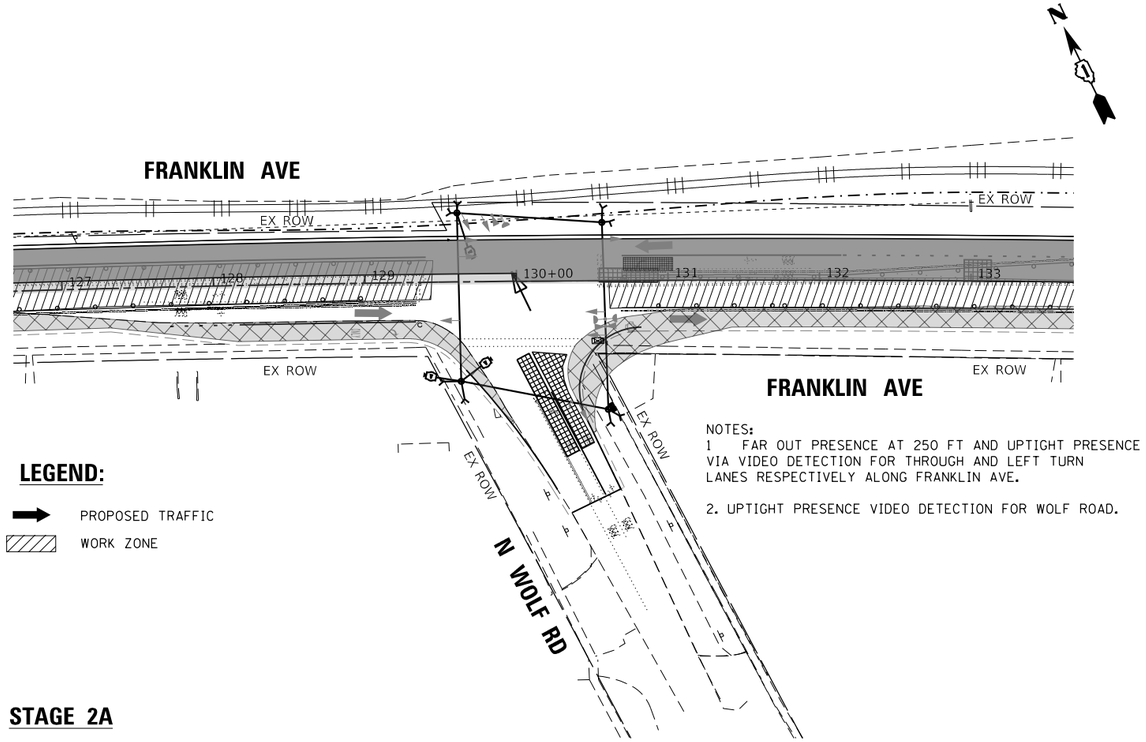
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION MOT STAGING PLAN
(SHEET 1 OF 2) FRANKLIN AVE & WOLF RD

SCALE: 1"=50' | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	218
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		



LEGEND:

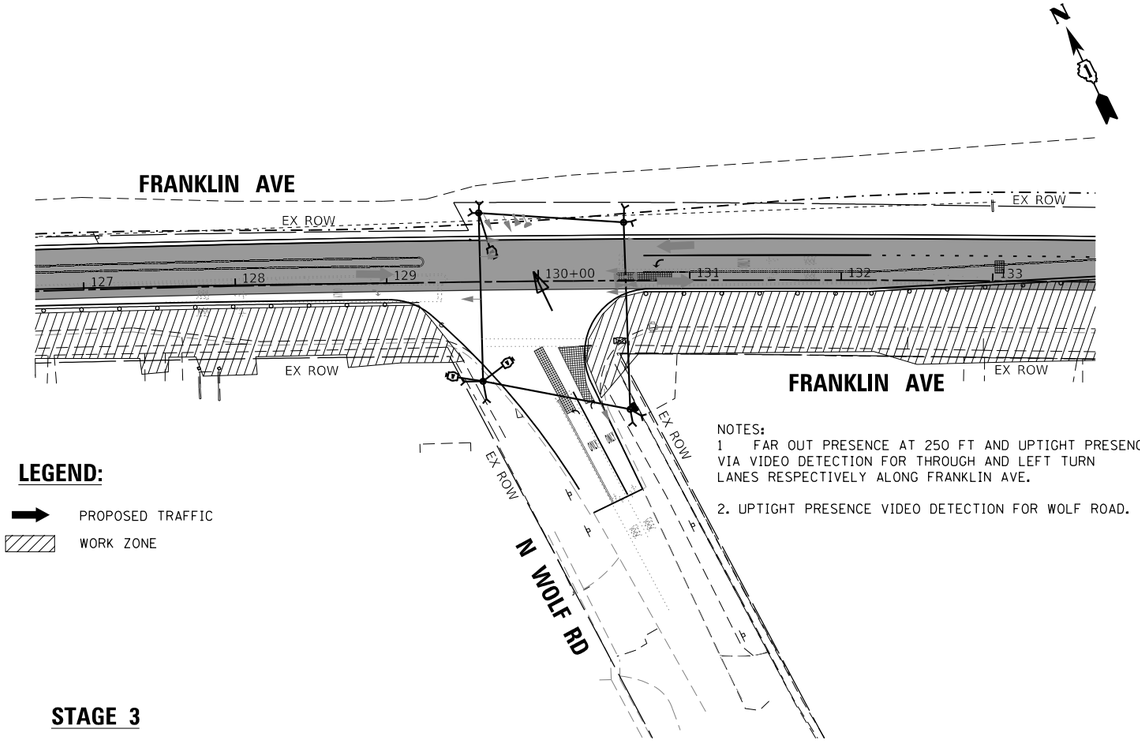
PROPOSED TRAFFIC

WORK ZONE

NOTES:
1 FAR OUT PRESENCE AT 250 FT AND UPTIGHT PRESENCE VIA VIDEO DETECTION FOR THROUGH AND LEFT TURN LANES RESPECTIVELY ALONG FRANKLIN AVE.

2. UPTIGHT PRESENCE VIDEO DETECTION FOR WOLF ROAD.

STAGE 2A



LEGEND:

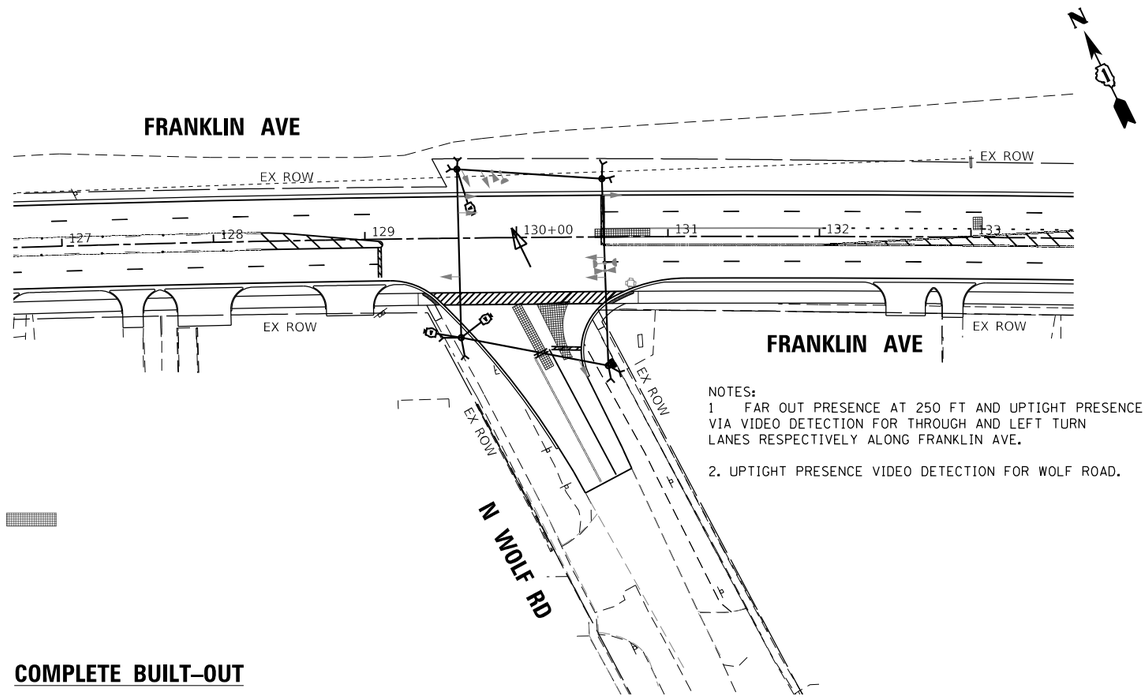
PROPOSED TRAFFIC

WORK ZONE

NOTES:
1 FAR OUT PRESENCE AT 250 FT AND UPTIGHT PRESENCE VIA VIDEO DETECTION FOR THROUGH AND LEFT TURN LANES RESPECTIVELY ALONG FRANKLIN AVE.

2. UPTIGHT PRESENCE VIDEO DETECTION FOR WOLF ROAD.

STAGE 3



NOTES:
1 FAR OUT PRESENCE AT 250 FT AND UPTIGHT PRESENCE VIA VIDEO DETECTION FOR THROUGH AND LEFT TURN LANES RESPECTIVELY ALONG FRANKLIN AVE.

2. UPTIGHT PRESENCE VIDEO DETECTION FOR WOLF ROAD.

COMPLETE BUILT–OUT

TS 5110

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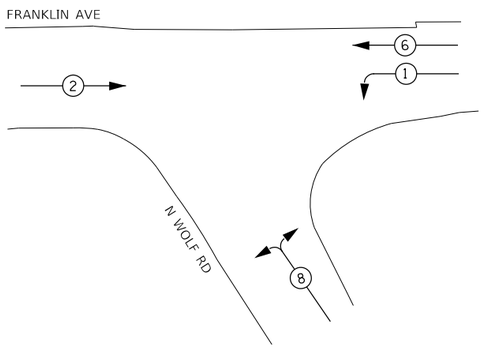
FILE NAME = $FILEL$S	USER NAME = ZimonA	DESIGNED - MA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
DELTA ENGINEERING GROUP		DRAWN - RM/NS	REVISED -	
	PLOT SCALE = 100.0000 ' / in.	CHECKED - MA	REVISED -	
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -	

TEMPORARY TRAFFIC SIGNAL INSTALLATION MOT STAGING PLAN
(SHEET 2 OF 2) FRANKLIN AVE & WOLF RD

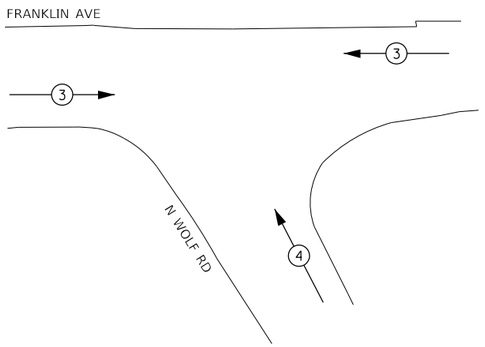
SCALE: 1"=50' | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	219
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

TEMPORARY CONTROLLER SEQUENCE

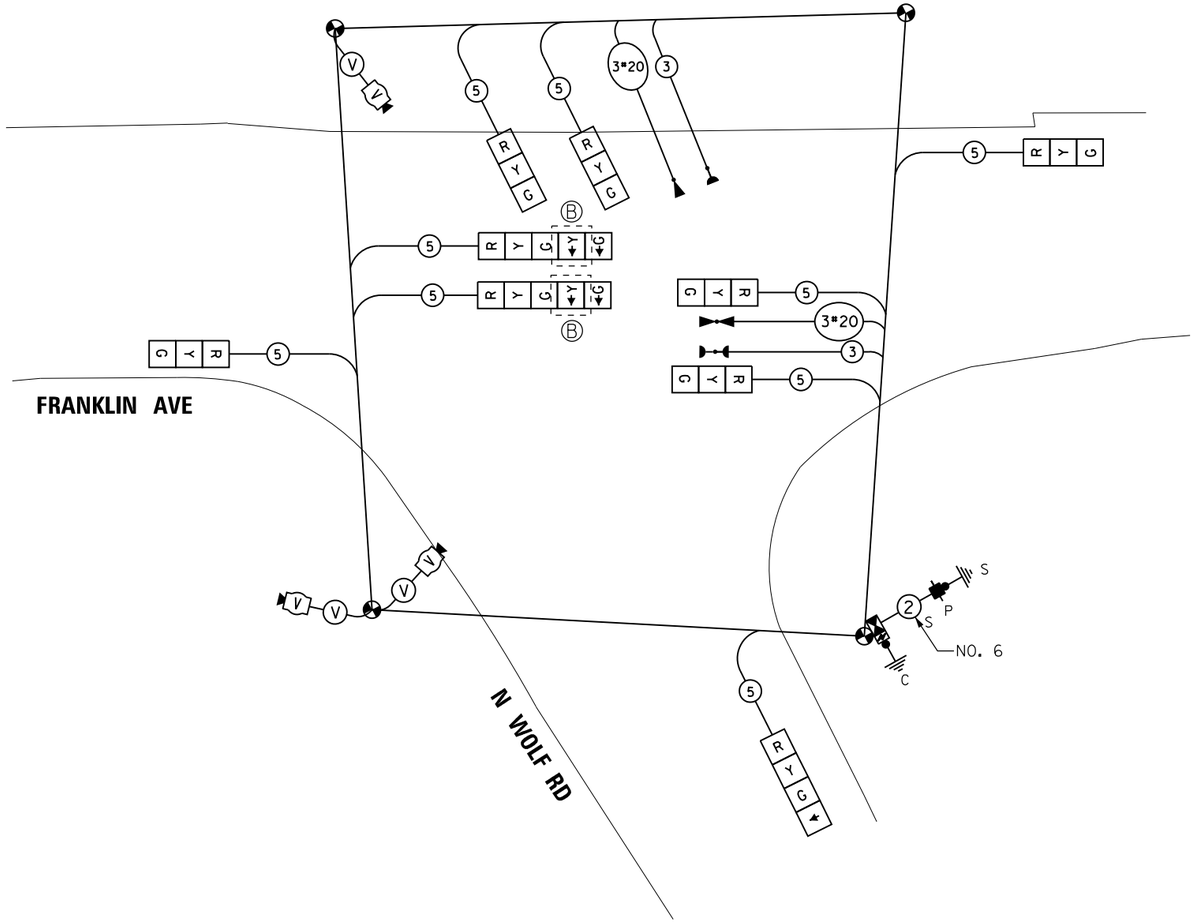


TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- PEDESTRIAN PHASE
- OL — OVERLAP
- * — NUMBER REFERS TO ASSOCIATED PHASE



Ⓑ CONTRACTOR SHALL BAG AND DISCONNECT YELLOW ARROW INDICATION IN ORDER TO OPERATE EAST AND WEST BOUND MOVEMENT AS SPLIT PHASE DURING PRESTAGE B, STAGE 2A AND STAGE 3.

TEMPORARY CABLE PLAN

(NOT TO SCALE)

TRAFFIC SIGNAL
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	9	11	50	49.5
(YELLOW)	9	20	5	9.0
(GREEN)	9	12	45	48.6
PERMISSIVE ARROW	4	10	10	4.0
PED. SIGNAL	-	20	100	-
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	-	-
LUMINAIRE	-	-	-	-
			TOTAL =	386.1

ENERGY COSTS TO:
VILLAGE OF FRANKLIN PARK
9500 BELMONT AVENUE
FRANKLIN PARK, IL 60131

ENERGY SUPPLY CONTACT: VILLAGE OF FRANKLIN PARK
PHONE: (847) 671-4800
COMPANY: ComEd

TS 5110

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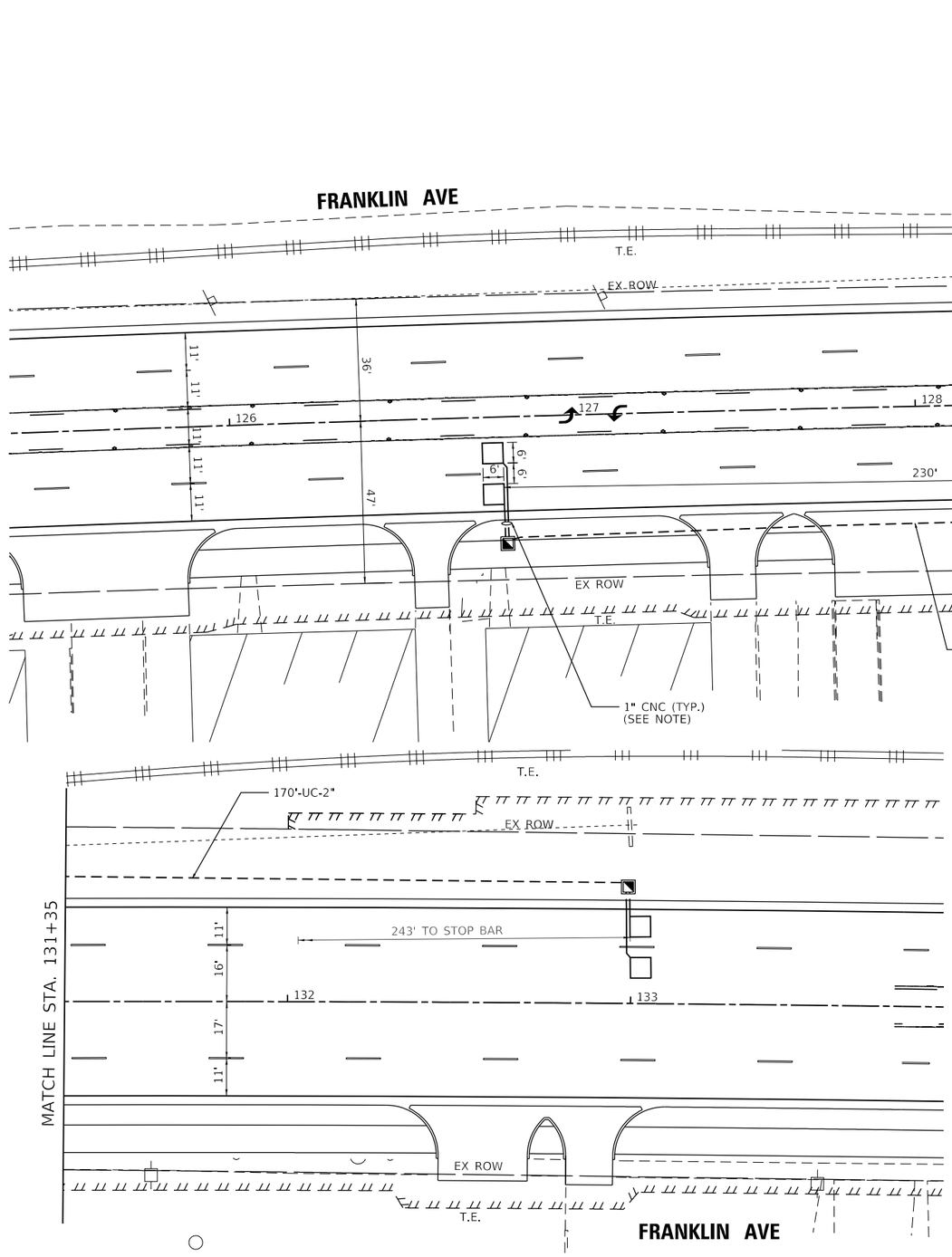
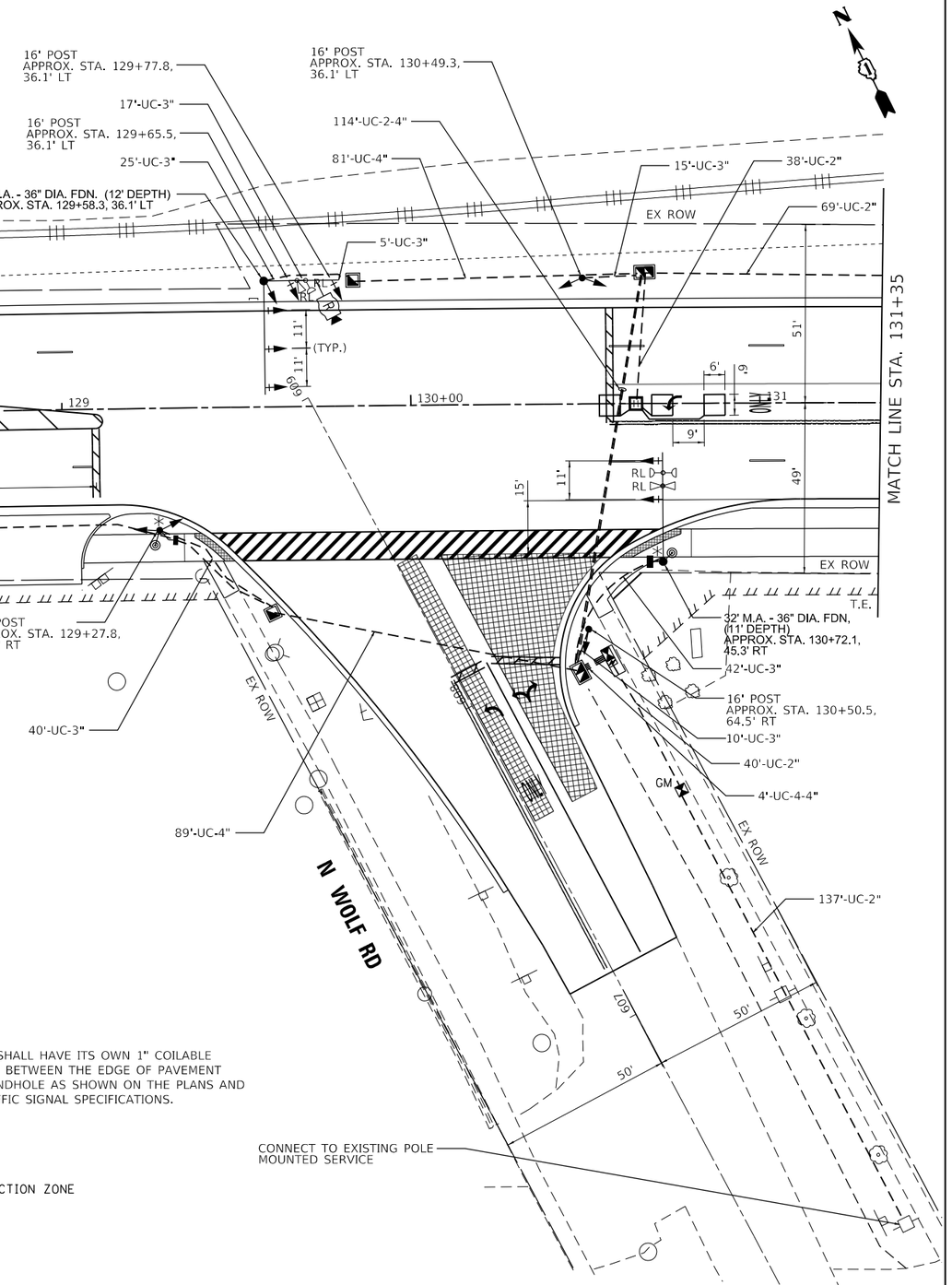
FILE NAME = sFILELSs	USER NAME = ZimonA	DESIGNED - MA	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**TEMPORARY CABLE PLAN, PHASE DESIGNATION DIAGRAM & EMERGENCY VEHICLE PREEMPTION SEQ – FRANKLIN AVE & WOLF RD**
DELTA ENGINEERING GROUP		DRAWN - RM/NS	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MA	REVISED -		
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	220
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	





NOTE:

EACH DETECTOR LOOP SHALL HAVE ITS OWN 1" COILABLE NON-METALLIC CONDUIT BETWEEN THE EDGE OF PAVEMENT AND THE ADJACENT HANDHOLE AS SHOWN ON THE PLANS AND AS STATED IN THE TRAFFIC SIGNAL SPECIFICATIONS.

LEGEND:

RADAR DETECTION ZONE

0 20 40 60
SCALE IN FEET

TS 5110

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DELTA ENGINEERING GROUP		DRAWN - RM/NS	REVISED -
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	PLOT DATE = 1/20/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN
FRANKLIN AVE & WOLF RD

SCALE: 1"=20' | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	221
		CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

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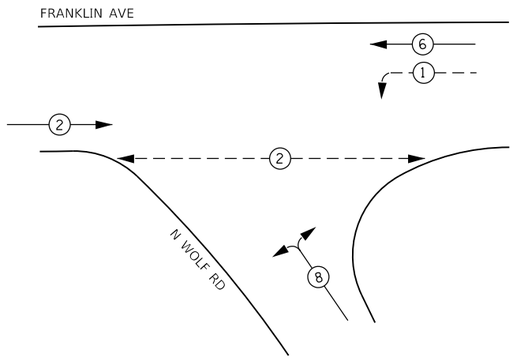
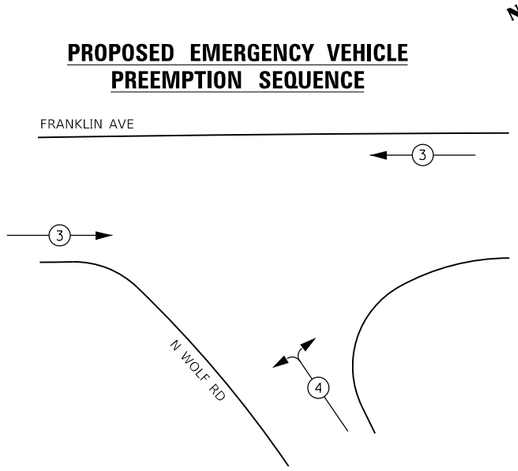
PROPOSED CONTROLLER SEQUENCE

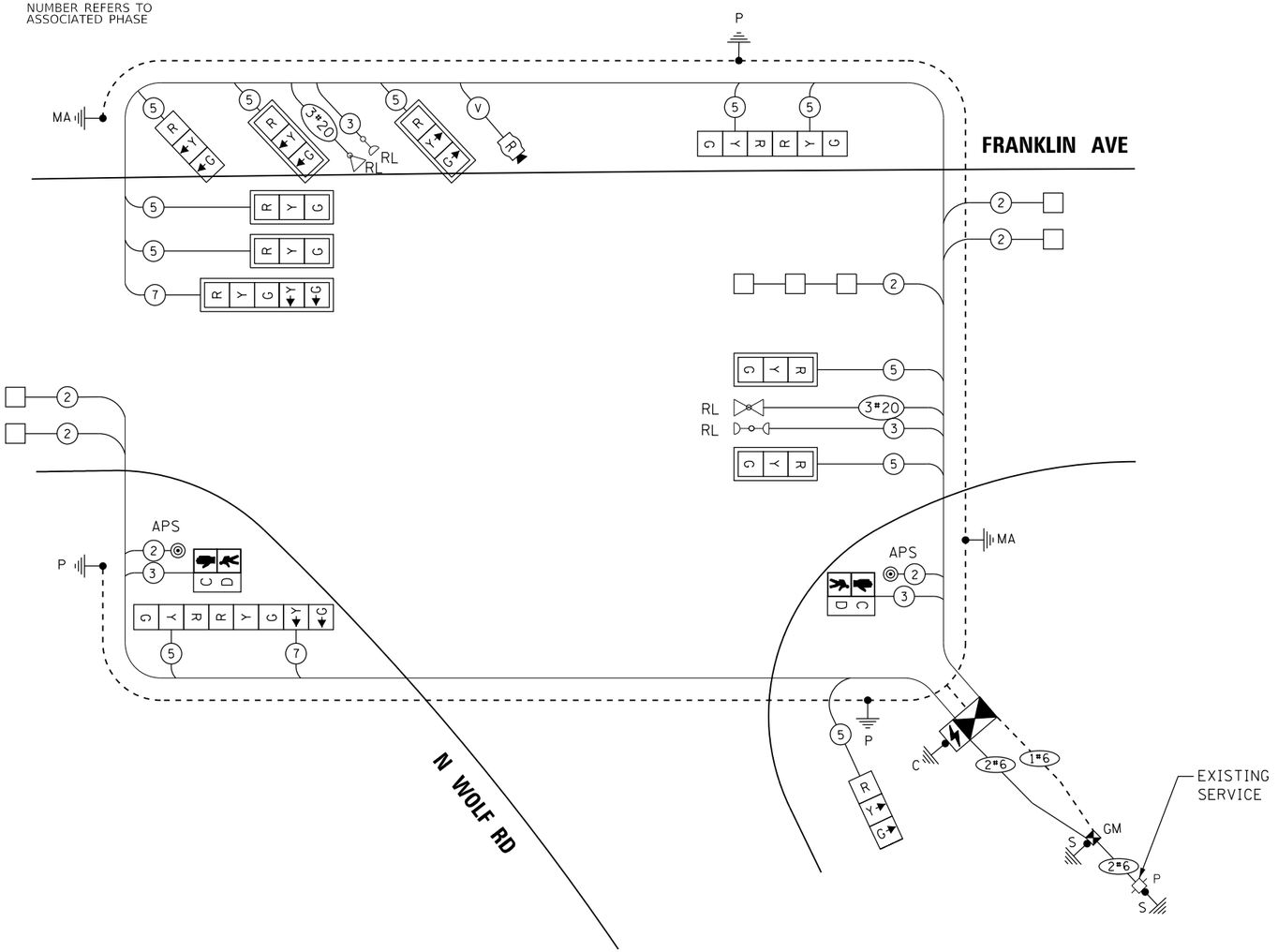


PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



LEGEND

- PROTECTED PHASE
- PROTECTED/PERMITTED PHASE
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE



CABLE PLAN
(NOT TO SCALE)

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	13	11	50	71.5
(YELLOW)	13	20	5	13.0
(GREEN)	13	12	45	70.2
PERMISSIVE ARROW	4	10	10	4.0
PED. SIGNAL	2	20	100	40.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINARE	-	-	-	-
			TOTAL =	323.7

ENERGY COSTS TO:
VILLAGE OF FRANKLIN PARK
9500 BELMONT AVENUE
FRANKLIN PARK, IL 60131

ENERGY SUPPLY CONTACT: VILLAGE OF FRANKLIN PARK
PHONE: (847) 671-4800
COMPANY: ComEd

TS 5110

FILE NAME = sFILELS5	USER NAME = ZimonA	DESIGNED - MA	REVISED -
DELTA ENGINEERING GROUP		DRAWN - RM/NS	REVISED -
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	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

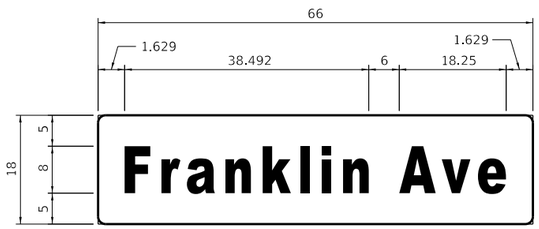
CABLE PLAN, PHASE DESIGNATION DIAGRAM & EMERGENCY VEHICLE PREEMPTION SEQUENCE – FRANKLIN AVE & WOLF RD

SCALE: | SHEET OF SHEETS | STA. | TO STA.

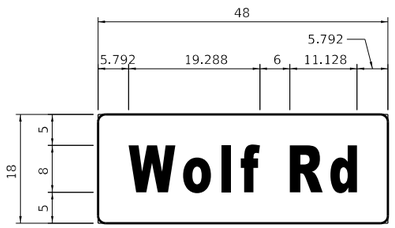
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	222
		CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

SIGN PANEL – TYPE 1 OR TYPE 2

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QUANTITY REQUIRED
D	8.25	1	ZZ	1



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QUANTITY REQUIRED
D	6	1	ZZ	2

NOTE: FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL

SCHEDULE OF QUANTITIES

	ITEM DECRIPTION	UNITS	TOTAL QTY.
	SIGN PANEL - TYPE 1	SQ FT	20
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	730
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	149
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	414
	HANDHOLE	EACH	4
	HEAVY-DUTY HANDHOLE	EACH	1
	DOUBLE HANDHOLE	EACH	2
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	243
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	653
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2046
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	492
	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1790
	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	180
	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	617
	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	3
	STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	1
	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 22 FT. AND 34 FT.	EACH	1
	CONCRETE FOUNDATION, TYPE A	FOOT	24
	CONCRETE FOUNDATION, TYPE C	FOOT	4
	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	23
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	5
	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1
	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	5
	INDUCTIVE LOOP DETECTOR	EACH	5
	DETECTOR LOOP, TYPE I	FOOT	232
	PEDESTRIAN PUSH-BUTTON	EACH	2
	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
*	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, COMPLETE	EACH	2
	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
	REMOVE EXISTING CONCRETE FOUNDATION	EACH	6
*	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	384
	FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET	EACH	1
	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
	RADAR VEHICLE DETECTION SYSTEM, SINGLE APPROACH, STOP BAR	EACH	1
	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
*	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	2
	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1

* 100% COST TO THE VILLAGE OF FRANKLIN PARK.

TS 5110

MODEL: Default
FILE NAME: pw:\\cvg-pw.bentley.com:cvg-pw-01\Documents\Projects\CHI\00244802-A1\80D CADD Design\803 Franklin-Williams Contract 61H14\803.04 Electrical\Sheets\D122318-sht-ts-016.dgn

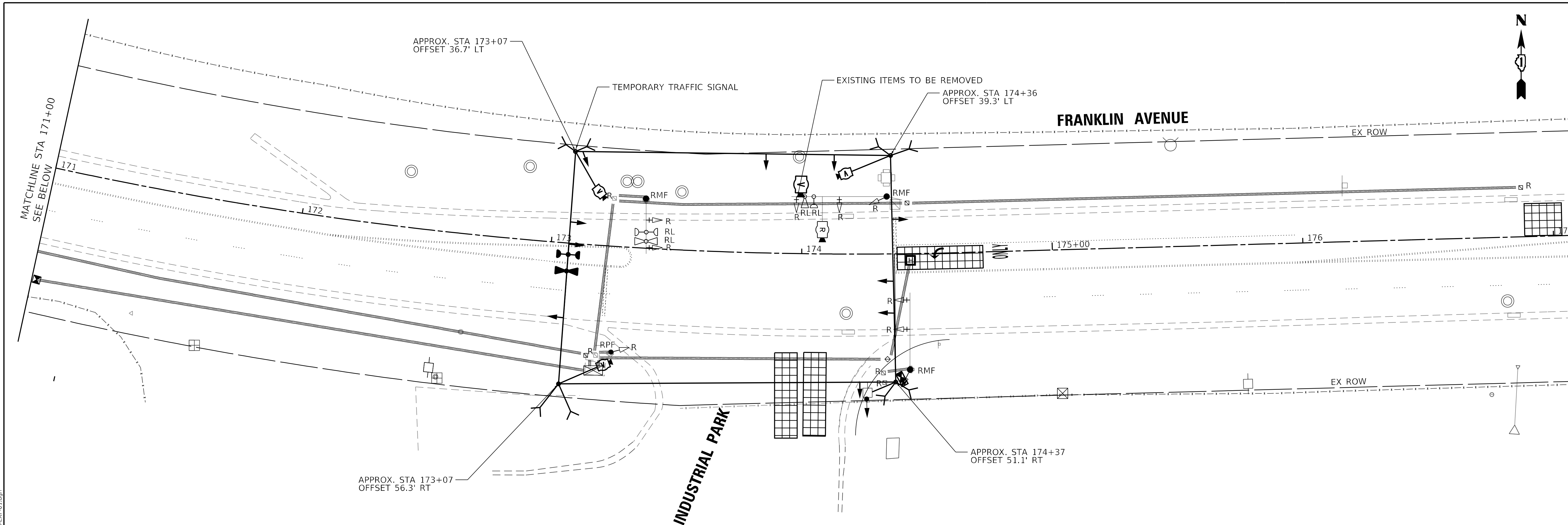
FILE NAME = $FILEL$$	USER NAME = ZimonA	DESIGNED - MA	REVISED -
DELTA ENGINEERING GROUP		DRAWN - RM/NS	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - MA	REVISED -
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

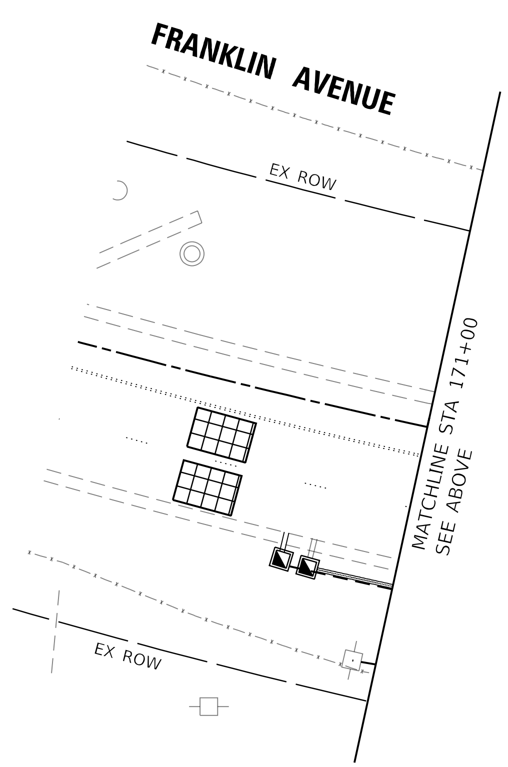
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS & SCHEDULE OF QUANTITIES
FRANKLIN AVE & WOLF RD

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	223
		CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			





REMOVAL AND RELOCATION NOTES:

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONTROLLER AND CABINET (COMPLETE)
3 EACH STEEL MAST ARM ASSEMBLY AND POST
4 EACH TRAFFIC SIGNAL POST
8 EACH 3-SECTION SIGNAL HEAD
2 EACH 5-SECTION SIGNAL HEAD
1 EACH SERVICE INSTALLATION
6 EACH TRAFFIC SIGNAL BACKPLATE

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SAFELY STORED AND RELOCATED TO THE PROPOSED MAST ARMS AND TRAFFIC SIGNAL CONTROLLER:

2 EACH CONFIRMATION BEACON
2 EACH LIGHT DETECTOR AMPLIFIER

LEGEND:

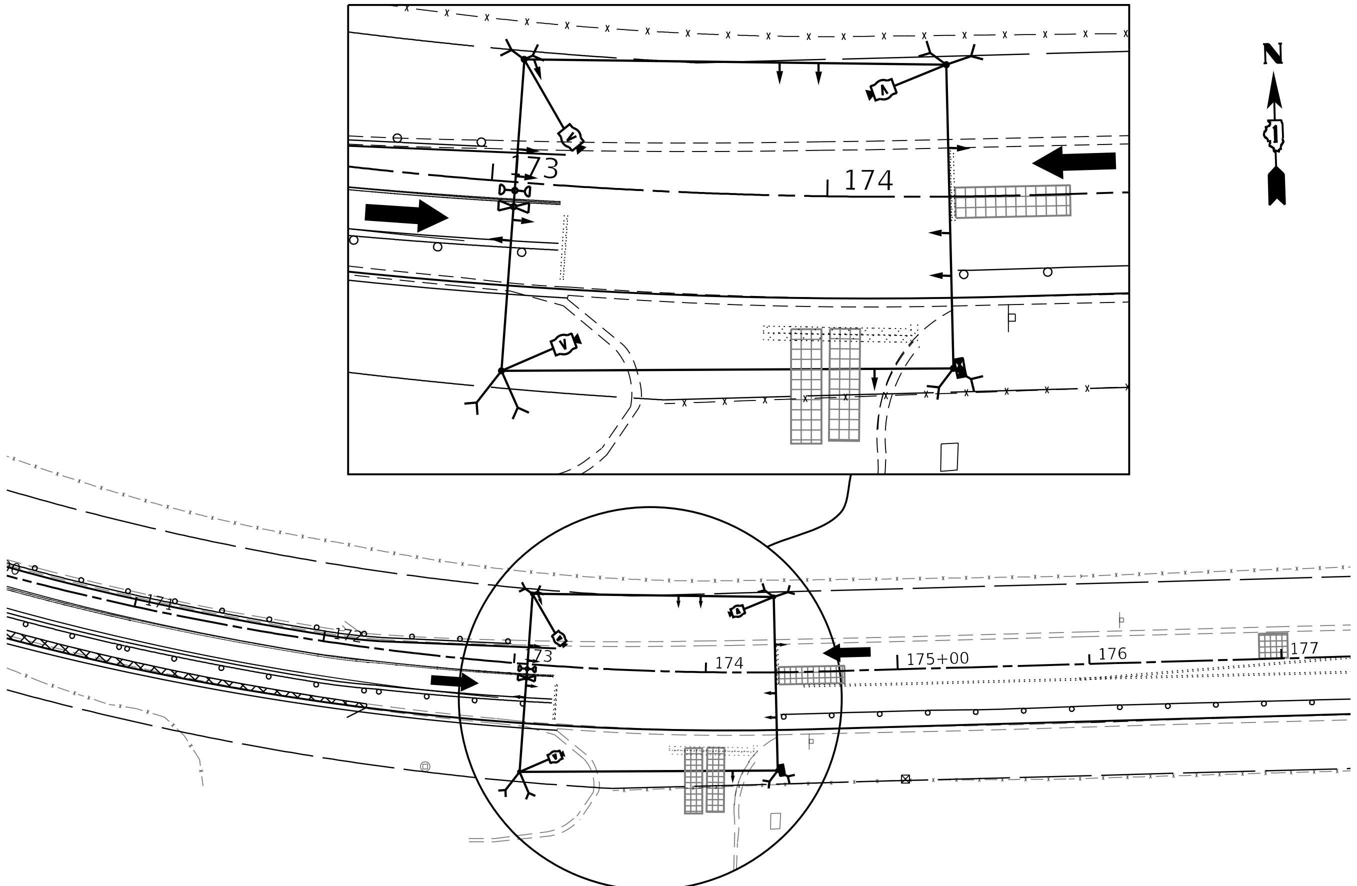
- VIDEO DETECTION ZONE

0 20 40 60
SCALE IN FEET

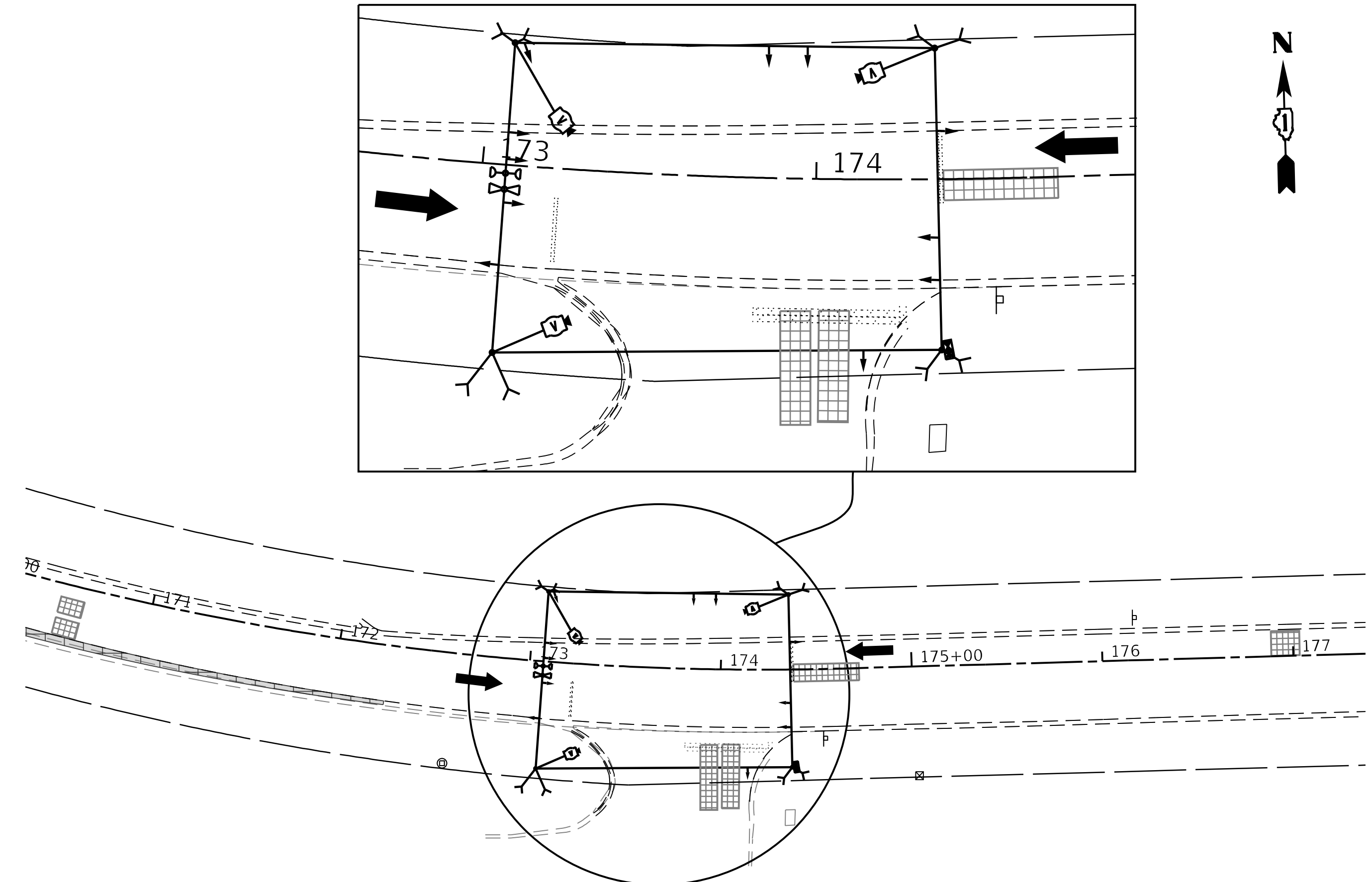
MODEL: Default
FILE NAME: pw:\\exp-pw.bentley.com:exp-pw-01\Documents\Projects\CHI\00244802-A1\800 CADD Des\Jm\803 Franklin-Williams Contract 61H14\803.04 Electrical\Sheet\D12231B-M+ts-EXP-01.dgn

FILE NAME =	USER NAME = ZimonA	DESIGNED - MA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMP TRAFFIC SIGNAL INSTALLATION & REMOVE EXIST TRAFFIC SIGNAL EQUIPMENT PLAN FRANKLIN AVE & INDUSTRIAL PARK
$FILE$$		DRAWN - RM	REVISED -		
DELTA ENGINEERING GROUP	PLOT SCALE = 40.0000 ' / in.	CHECKED - MA	REVISED -		
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.

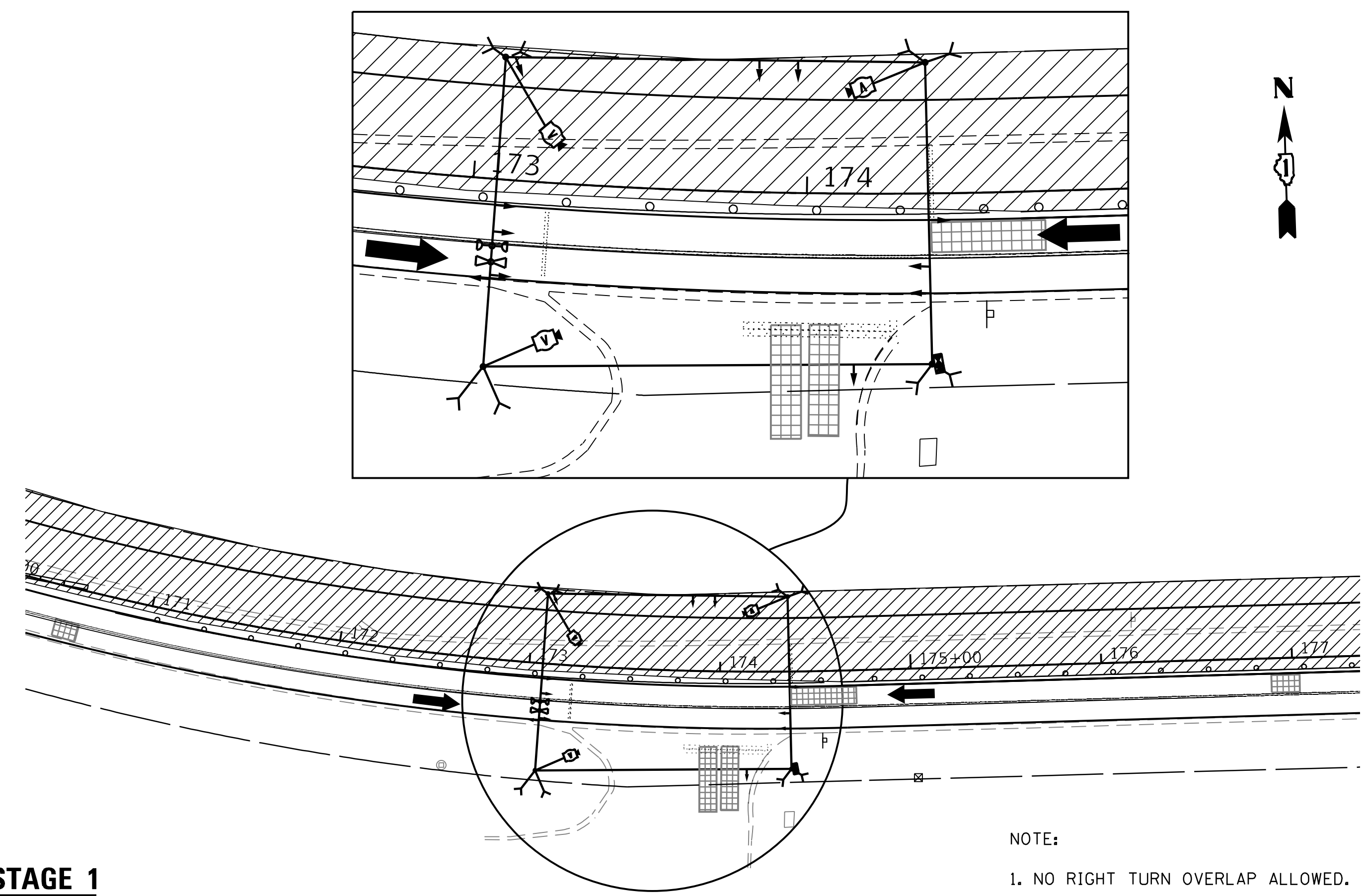
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	224
CONTRACT NO. 61H14				
ILLINOIS FED. AID PROJECT				



PRESTAGE A



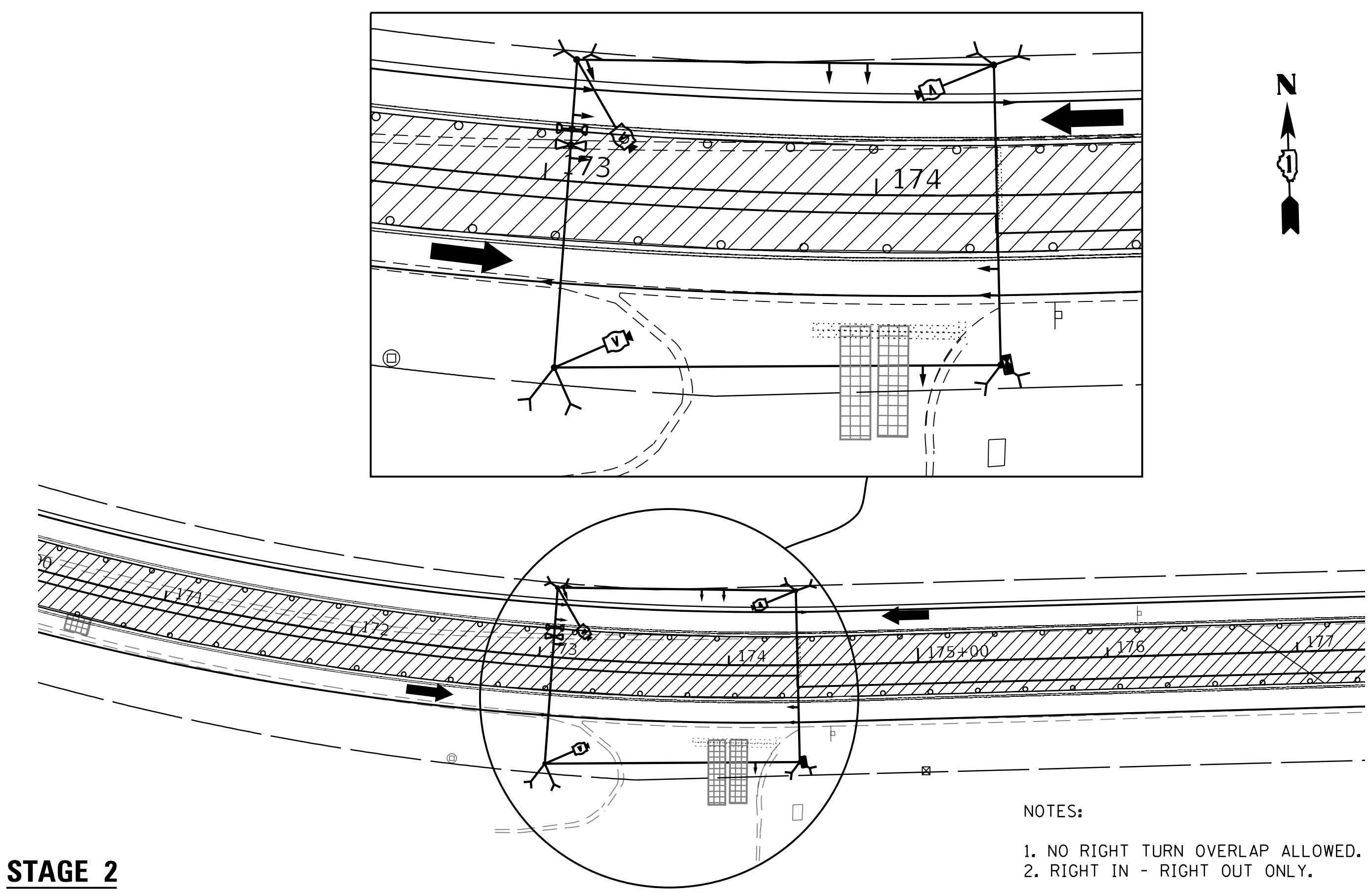
PRESTAGE B



STAGE 1

NOTE:

1. NO RIGHT TURN OVERLAP ALLOWED.



STAGE 2

NOTES:

1. NO RIGHT TURN OVERLAP ALLOWED.
2. RIGHT IN - RIGHT OUT ONLY.

MODEL: Default
FILE NAME: pw:\\exp-pw.bentley.com:exp-pw-01\Documents\Projects\CHI\00244802-A1\800 CADD Design\803 Franklin-Williams Contract 61H14\803.04 Electrical\Sheet\D122318-sht-ts-EXP-02.dgn

FILE NAME =	USER NAME = ZimonA	DESIGNED - MA	REVISED -
$FILELS$		DRAWN - RM	REVISED -
DELTA ENGINEERING GROUP	PLOT SCALE = 100.0000 ' / in.	CHECKED - MA	REVISED -
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

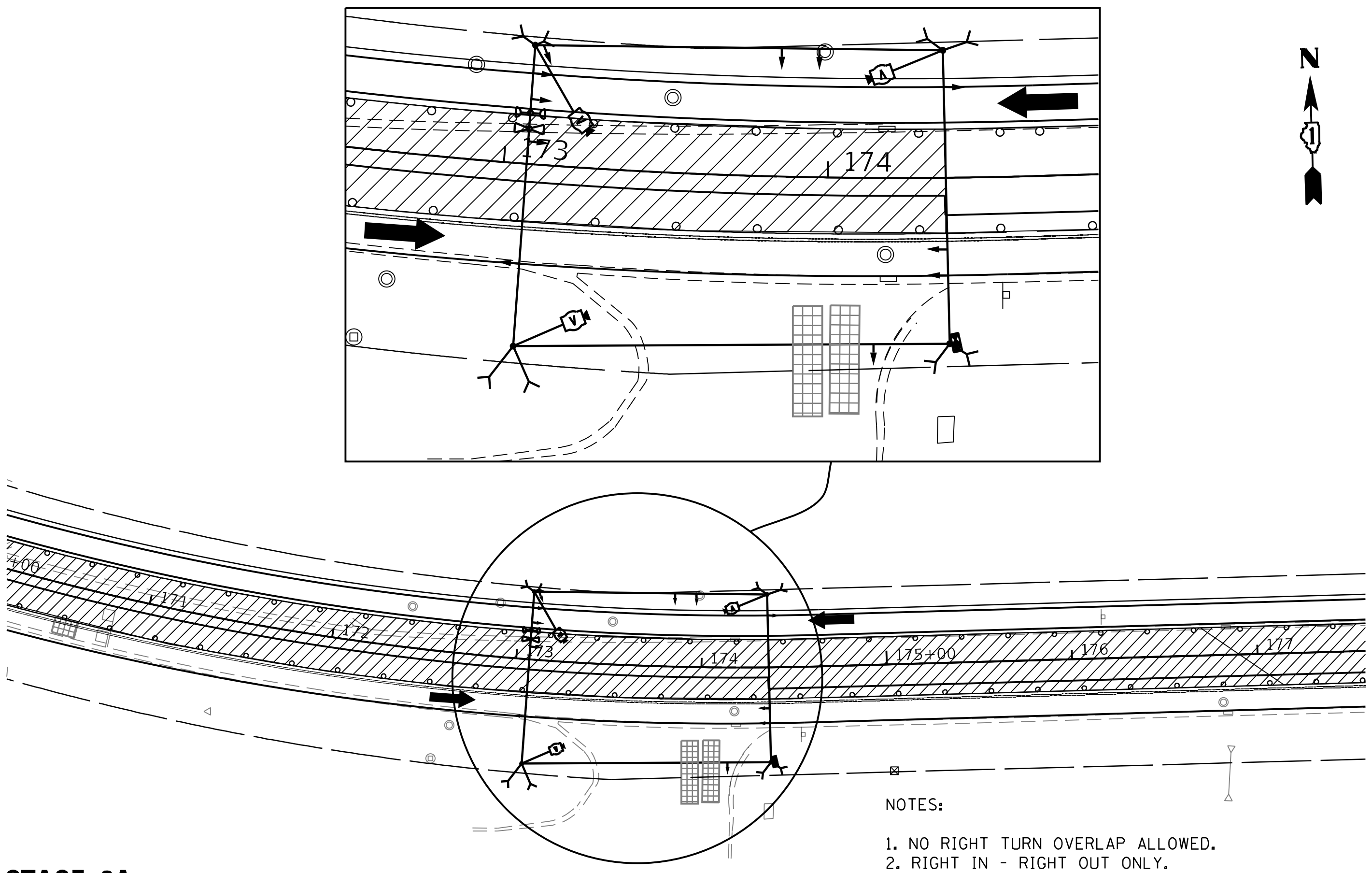
TEMP TRAFFIC SIGNAL INSTALLATION PRESTAGE A THRU STAGE 2
FRANKLIN AVE & INDUSTRIAL PARK

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	225

CONTRACT NO. 61H14

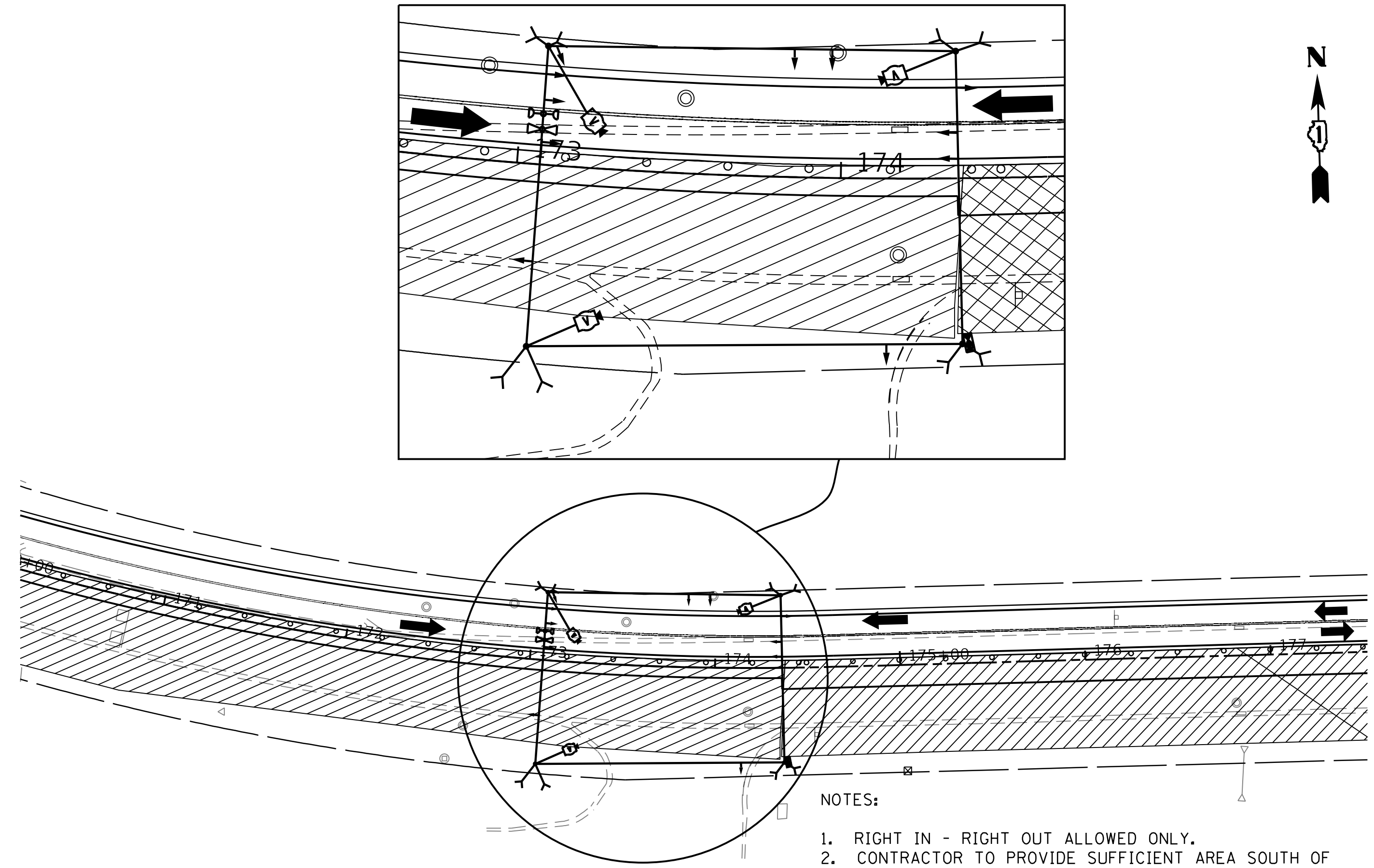
ILLINOIS | FED. AID PROJECT



NOTES:

1. NO RIGHT TURN OVERLAP ALLOWED.
2. RIGHT IN - RIGHT OUT ONLY.

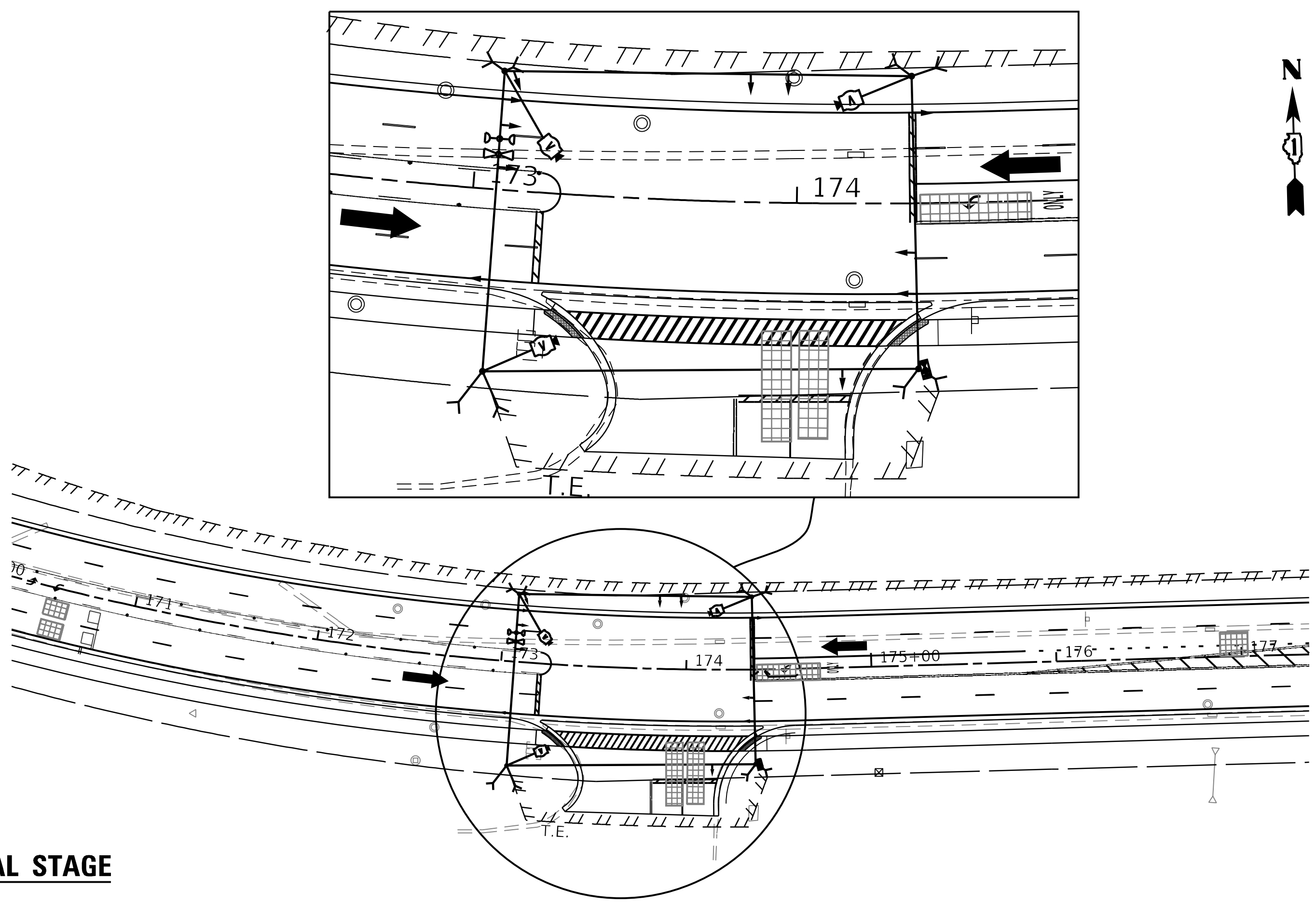
STAGE 2A



NOTES:

1. RIGHT IN - RIGHT OUT ALLOWED ONLY.
2. CONTRACTOR TO PROVIDE SUFFICIENT AREA SOUTH OF EASTBOUND LANES AT INTERSECTION TO ACCOMODATE EASTBOUND RIGHT TURN TRAFFIC.

STAGE 3



FINAL STAGE

MODEL: Default

FILE NAME =	USER NAME = ZimonA	DESIGNED - MA	REVISED -
$FILEL$$		DRAWN - RM	REVISED -
DELTA ENGINEERING GROUP	PLOT SCALE = 100.0000 ' / in.	CHECKED - MA	REVISED -
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

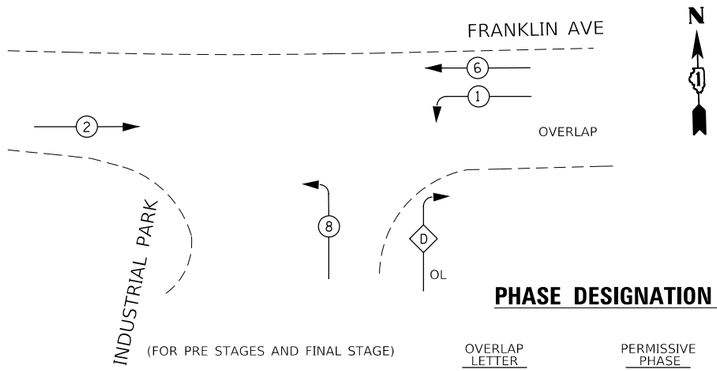
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMP TRAFFIC SIGNAL INSTALLATION THRU AS-BUILT PR PAVEMENT
STAGE 2A - FRANKLIN AVE & INDUSTRIAL PARK

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	226
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

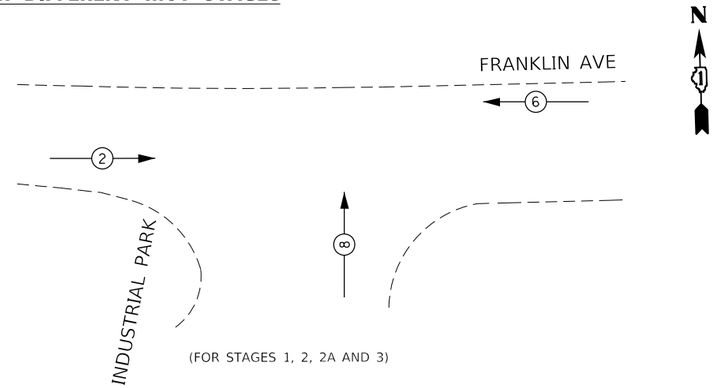
TEMPORARY CONTROLLER SEQUENCES FOR DIFFERENT MOT STAGES



PHASE DESIGNATION DIAGRAM

(FOR PRE STAGES AND FINAL STAGE)

OVERLAP LETTER		PERMISSIVE PHASE	-	PROTECTED PHASE
D		8	+	1

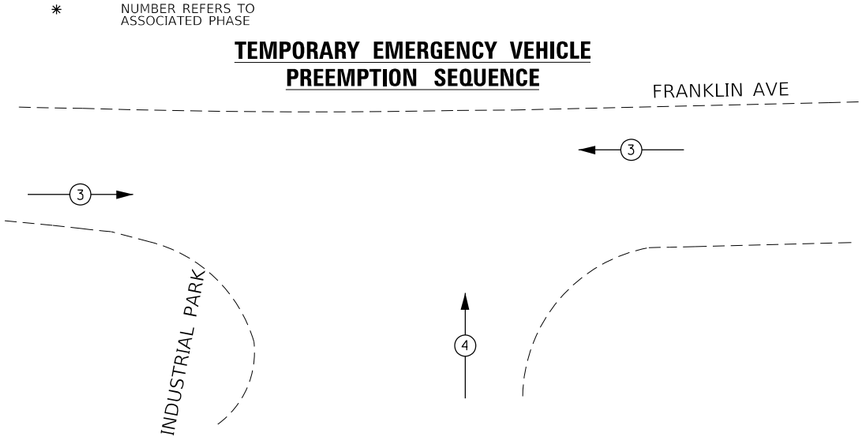


(FOR STAGES 1, 2, 2A AND 3)

LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- PEDESTRIAN PHASE
- OL — OVERLAP
- * — NUMBER REFERS TO ASSOCIATED PHASE

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE

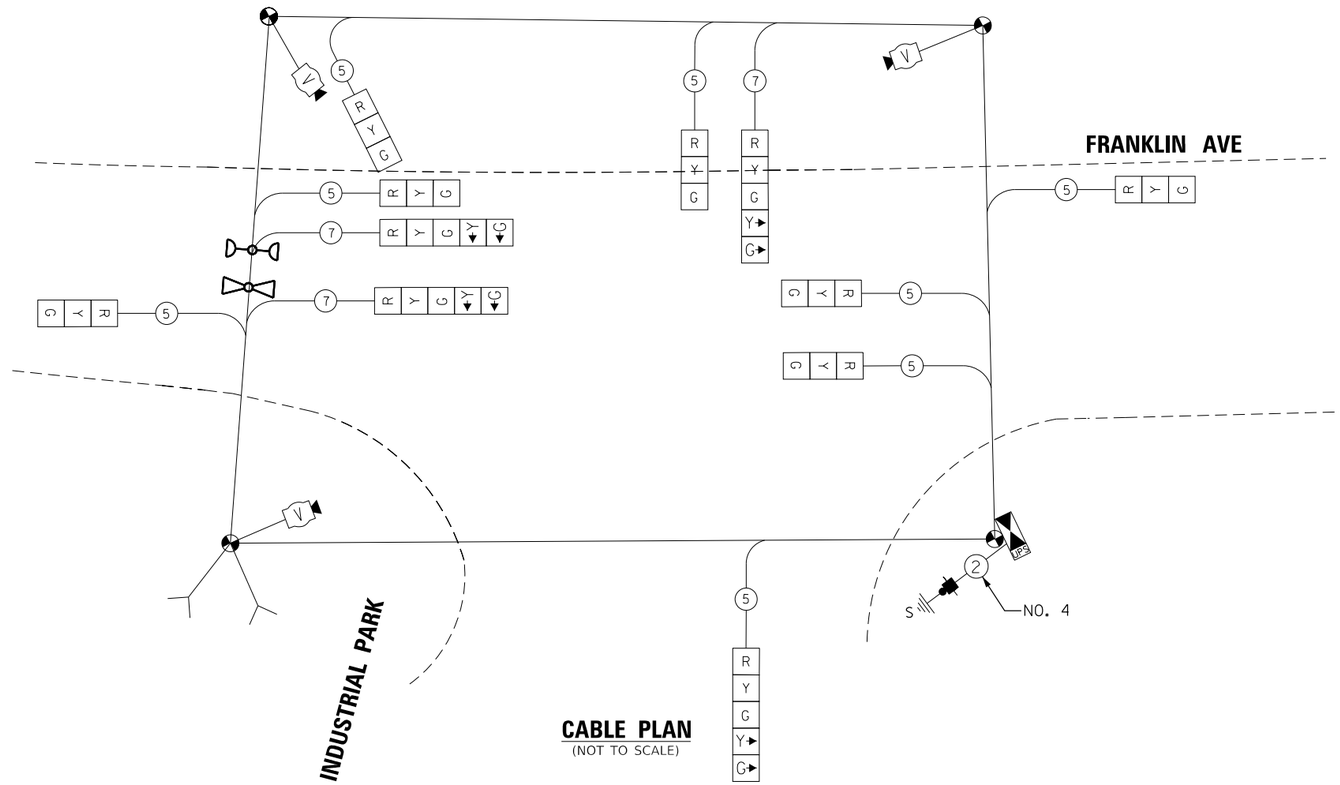


TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	× %OPERATION	
SIGNAL (RED)	10		11	50	55.0
(YELLOW)	10		20	5	10.0
(GREEN)	10		12	45	54.0
ARROW	4		10	10	4.0
PED. SIGNAL	-		25	-	-
CONTROLLER	1		100	100	100.0
ILLUM. SIGN	-		120	-	-
VIDEO SYSTEM	1		150	100	150.0
UPS	1		25	100	25.0
FLASHER	-		-	50	-
				TOTAL =	398.0

ENERGY COSTS TO:
VILLAGE OF FRANKLIN PARK
9500 BELMONT AVENUE
FRANKLIN PARK, IL 60131

ENERGY SUPPLY CONTACT: VILLAGE OF FRANKLIN PARK
PHONE: (847) 671-4800
COMPANY: ComEd

TEMPORARY EMERGENCY VEHICLE PREEMPTIONS		
EMERGENCY VEHICLE PREEMPTIONS	3	4
MOVEMENT	← →	↑



CABLE PLAN
(NOT TO SCALE)

NOTES

1. RIGHT & LEFT TURN ARROW INDICATORS HEADS TO BE TURNED ON ONLY IN PRE-STAGE A AND B AND AT COMPLETE BUILT OUT. THESE HEADS TO BE TURNED OFF AND BAGGED IN OTHER STAGES.
2. HEADS FOR WESTBOUND SHOULD BE BAGGED AND DEACTIVATED DURING STAGES 2 AND 2A WHEN THE WORK AREAS SEPERATES EASTBOUND AND WESTBOUND.
3. CONTRACTOR TO KEEP OPEN INDUSTRIAL PARK DRIVE IN ALL STAGES.

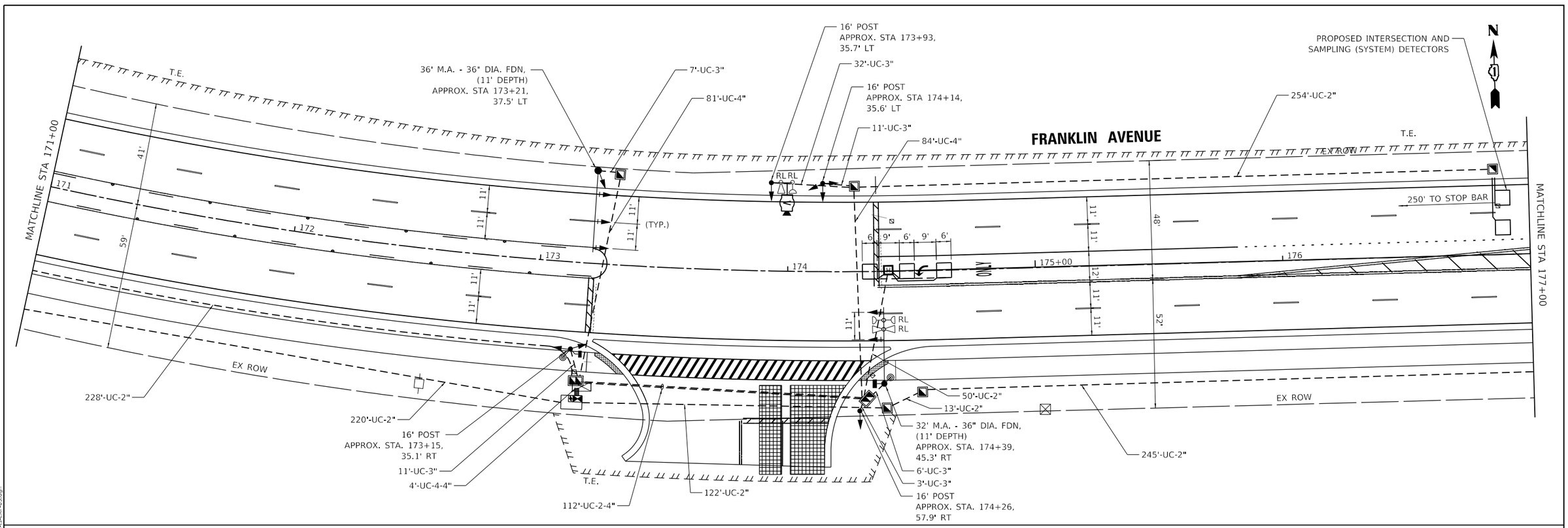
FILE NAME =	USER NAME = ZimonA	DESIGNED - MA	REVISED -
$FILELS$		DRAWN - RM	REVISED -
DELTA ENGINEERING GROUP	PLOT SCALE = 40.0000 ' / in.	CHECKED - MA	REVISED -
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

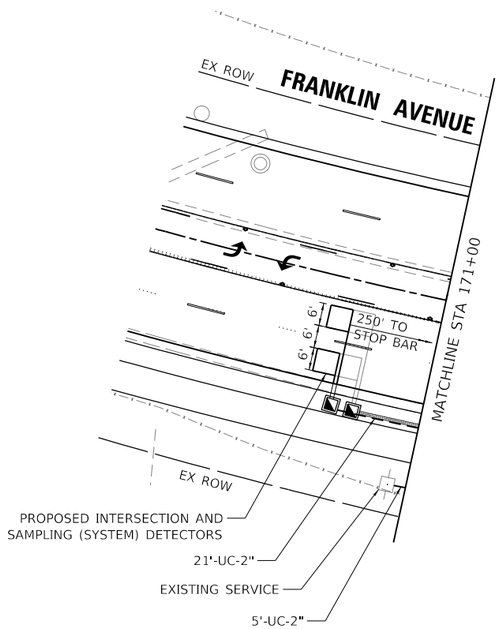
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

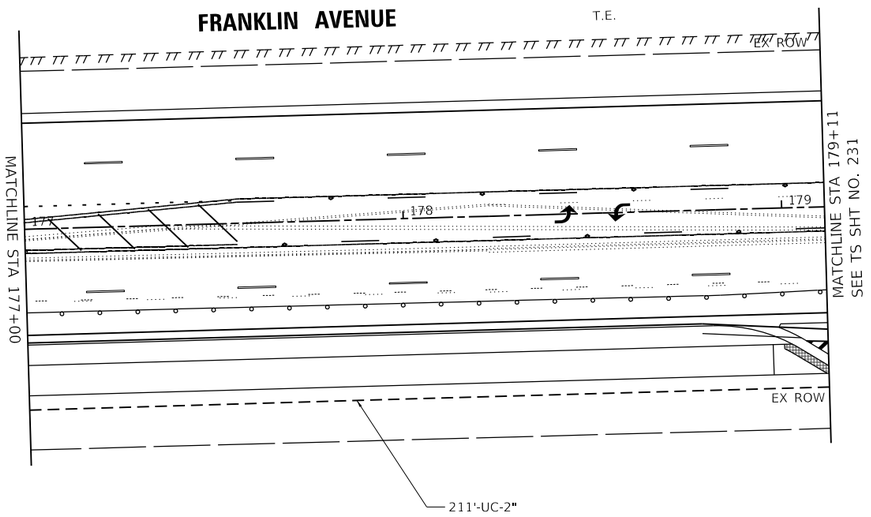
TEMP CABLE PLAN, TEMP PHASE DESIGNATION DIAGRAM & TEMP EMERGENCY VEH PREEMPTION SEQ. – FRANKLIN AVE & INDUSTRIAL PK

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	227
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	







LEGEND:

- VIDEO DETECTION ZONE

0 20 40 60

SCALE IN FEET

FILE NAME = $FILELS	USER NAME = GARCIAAZ	DESIGNED - MA	REVISED -
		DRAWN - RM	REVISED -
DELTA ENGINEERING GROUP	PLOT SCALE = 40.0000 ' / in.	CHECKED - MA	REVISED -
	PLOT DATE = 1/20/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN (SHEET 1 OF 2)
FRANKLIN AVE & INDUSTRIAL PARK

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	228
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

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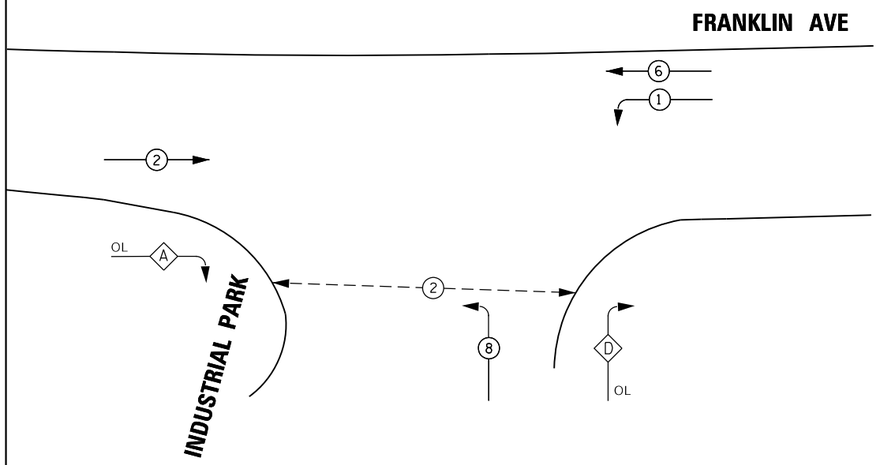
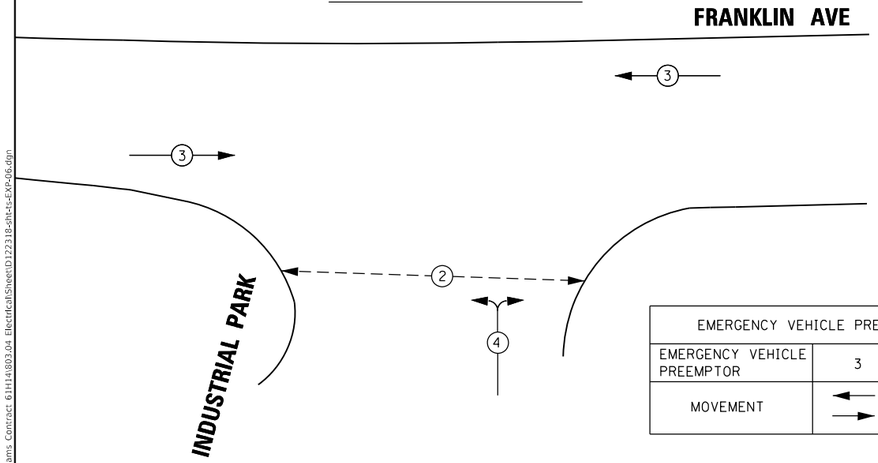
PROPOSED CONTROLLER SEQUENCE



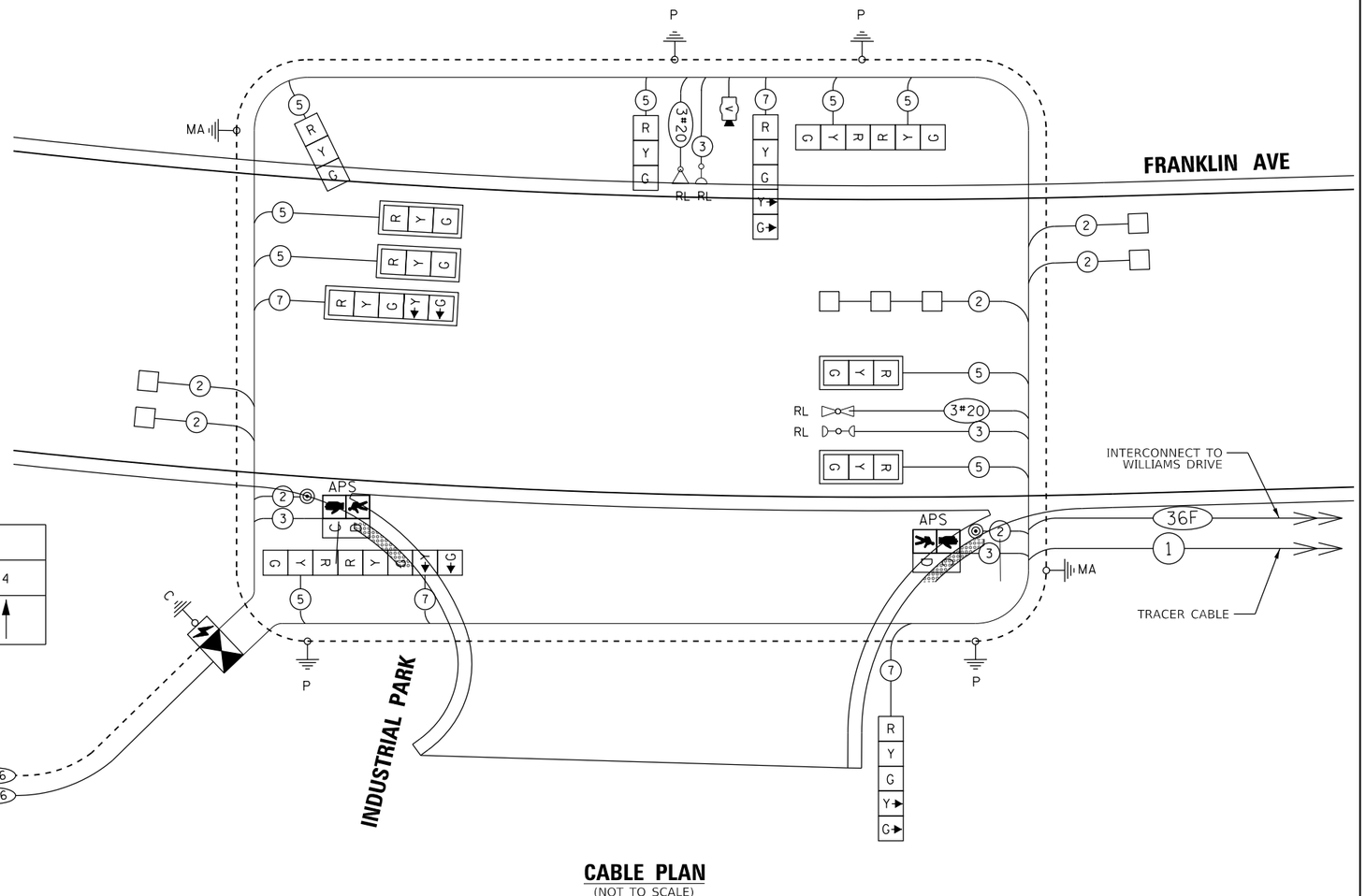
TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑

LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- PEDESTRIAN PHASE
- OL — OVERLAP
- * — NUMBER REFERS TO ASSOCIATED PHASE



CABLE PLAN
(NOT TO SCALE)

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	× %OPERATION	TOTAL WATTAGE
SIGNAL (RED)	13		11	50	71.5
(YELLOW)	13		20	5	13.0
(GREEN)	13		12	45	70.2
ARROW	8		10	10	8.0
PED. SIGNAL	2		25	100	50.0
CONTROLLER	1		100	100	100.0
ILLUM. SIGN	-		120	50	-
VIDEO SYSTEM	-		150	100	-
UPS	1		25	100	25.0
FLASHER	-		-	50	-
				TOTAL =	337.7

ENERGY COSTS TO:
VILLAGE OF FRANKLIN PARK
9500 BELMONT AVENUE
FRANKLIN PARK, IL 60131

ENERGY SUPPLY CONTACT: VILLAGE OF FRANKLIN PARK
PHONE: (847) 671-4800
COMPANY: ComEd

MODEL: Default
FILE NAME: pw:\\exp-pw.bentley.com:exp-pw-01\Documents\Projects\CH\00244802-A1\800 CADD Design\803 Franklin-Williams Contract 61H14\803_04 Electrical\Sheet\D122318-sht-ts-EXP-05.dgn

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		DRAWN - RM	REVISED -
DELTA ENGINEERING GROUP	PLOT SCALE = 40.0000 ' / in.	CHECKED - MA	REVISED -
	PLOT DATE = 1/20/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

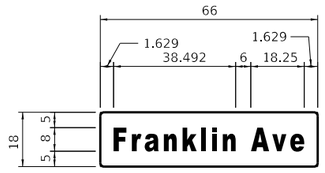
CABLE PLAN, PHASE DESIGNATION DIAGRAM & EMERGENCY VEHICLE PREEMPTION SEQUENCE – FRANKLIN AVE & INDUSTRIAL PARK

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	229
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		

SIGN PANEL – TYPE 1 OR TYPE 2

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QUANTITY REQUIRED
D	8.25	1	ZZ	2

SCHEDULE OF QUANTITIES

	ITEM DECRIPTION	UNITS	TOTAL QTY.
	SIGN PANEL - TYPE 1	SQ FT	17
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	778
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	70
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	405
	HANDHOLE	EACH	6
	HEAVY-DUTY HANDHOLE	EACH	1
	DOUBLE HANDHOLE	EACH	2
	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	207
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	728
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1724
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	656
	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	995
	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	225
	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	344
	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	4
	STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	1
	STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1
	CONCRETE FOUNDATION, TYPE A	FOOT	16
	CONCRETE FOUNDATION, TYPE C	FOOT	4
	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	22
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	5
	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	3
	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1
	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	5
	INDUCTIVE LOOP DETECTOR	EACH	3
	DETECTOR LOOP, TYPE I	FOOT	228
	PEDESTRIAN PUSH-BUTTON	EACH	2
	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
*	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, COMPLETE	EACH	2
	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
	REMOVE EXISTING CONCRETE FOUNDATION	EACH	6
*	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	200
	VIDEO VEHICLE DETECTION SYSTEM	EACH	4
	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
*	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	2
	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1

* 100% COST TO THE VILLAGE OF FRANKLIN PARK.

MODEL: Default
FILE NAME: pw:\\exp-pw.bentley.com:exp-pw-01\Documents\Projects\CH\00244802-A1\800 CADD Design\803 Franklin-Williams Contract 61H14\803.04 Electrical\Sheet\D122318-sht-ts-EXP-07.dgn

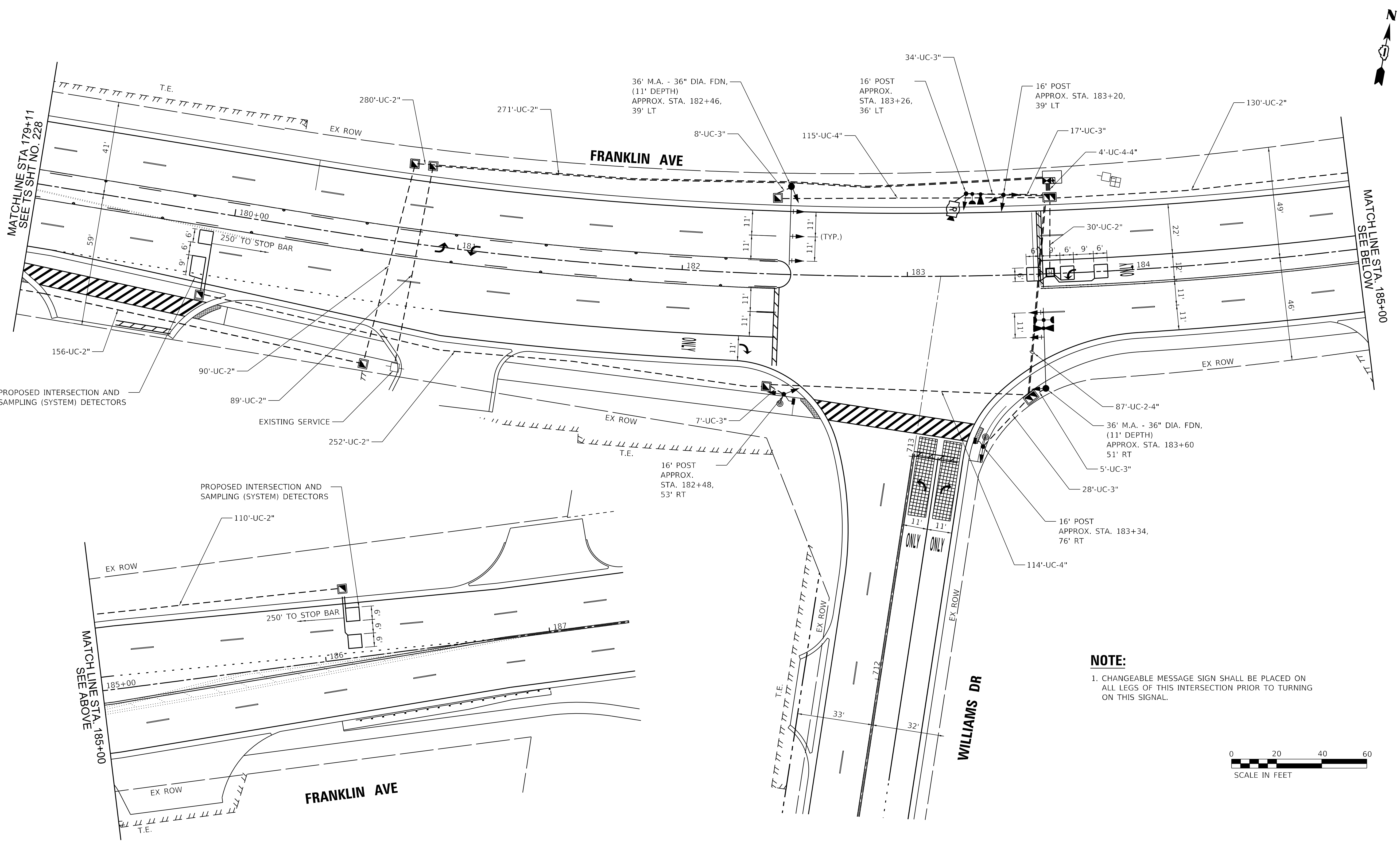
FILE NAME = sFILELS$	USER NAME = GARCIAAZ	DESIGNED - MA	REVISED -
		DRAWN - RM	REVISED -
DELTA ENGINEERING GROUP	PLOT SCALE = 40.0000 ' / in.	CHECKED - MA	REVISED -
	PLOT DATE = 1/20/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS & SCHEDULE OF QUANTITIES
FRANKLIN AVE & INDUSTRIAL PARK

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	230
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		



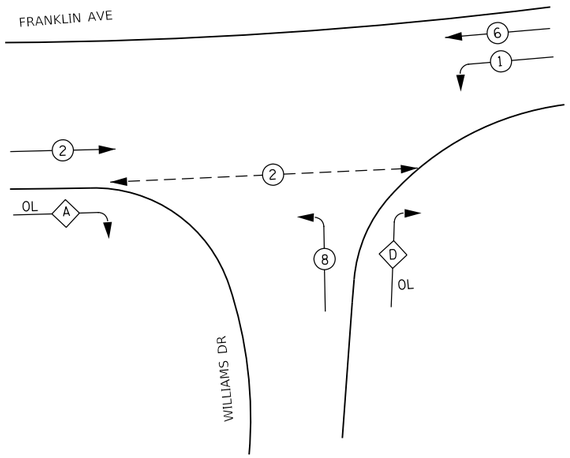
NOTE:

1. CHANGEABLE MESSAGE SIGN SHALL BE PLACED ON ALL LEGS OF THIS INTERSECTION PRIOR TO TURNING ON THIS SIGNAL.

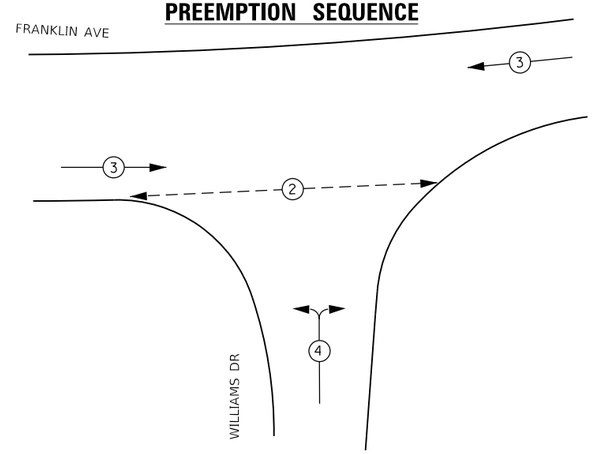
FILE NAME =	USER NAME = GARCIAAZ	DESIGNED - MA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODERNIZATION PLAN FRANKLIN AVE & WILLIAMS DR
$FILE$		DRAWN - RM	REVISED -		
DELTA ENGINEERING GROUP	PLOT SCALE = 40.0000 ' / in.	CHECKED - MA	REVISED -		
	PLOT DATE = 1/20/2022	DATE - 1/12/2022	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	231
		CONTRACT NO. 61H14		
		ILLINOIS FED. AID PROJECT		

PROPOSED CONTROLLER SEQUENCE

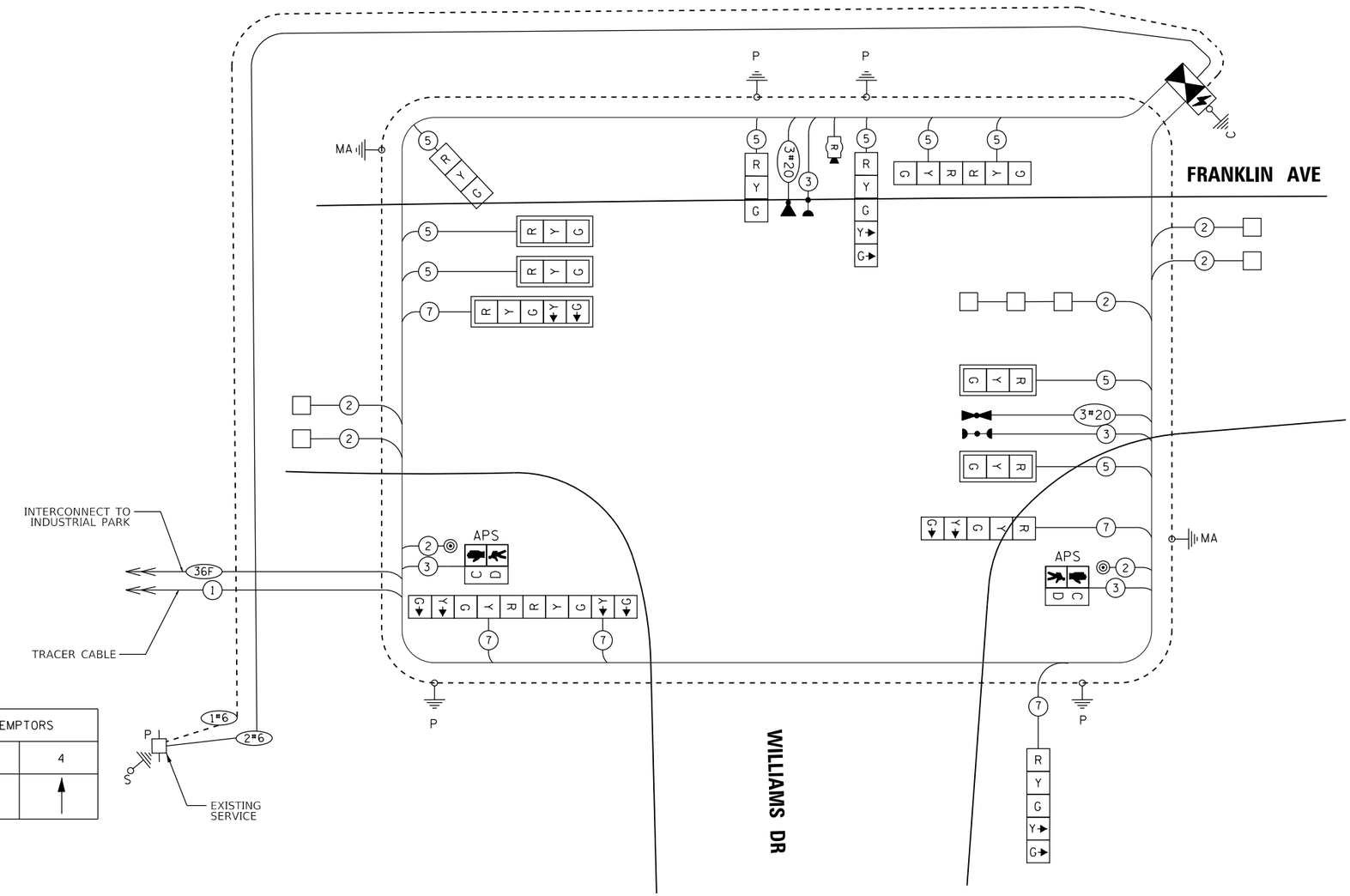


PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



LEGEND

- PROTECTED PHASE
- PROTECTED/PERMITTED PHASE
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE



CABLE PLAN
(NOT TO SCALE)

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	14		11	50	77.0
(YELLOW)	14		20	5	14.0
(GREEN)	14		12	45	75.6
ARROW	10		10	10	10.0
PED. SIGNAL	2		25	100	50.0
CONTROLLER	1		100	100	100.0
ILLUM. SIGN	-		120	50	-
VIDEO SYSTEM	-		150	100	-
UPS	1		25	100	25.0
FLASHER	-		-	50	-
				TOTAL =	351.6

ENERGY COSTS TO:
VILLAGE OF FRANKLIN PARK
9500 BELMONT AVENUE
FRANKLIN PARK, IL 60131

ENERGY SUPPLY CONTACT: VILLAGE OF FRANKLIN PARK
PHONE: (847) 671-4800
COMPANY: ComEd

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑

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		DRAWN - RM	REVISED -
DELTA ENGINEERING GROUP	PLOT SCALE = 40.0000 ' / in.	CHECKED - MA	REVISED -
	PLOT DATE = 1/20/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

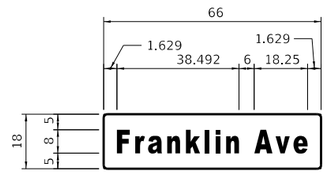
CABLE PLAN, PHASE DESIGNATION DIAGRAM & EMERGENCY VEHICLE PREEMPTION SEQUENCE – FRANKLIN AVE & WILLIAMS DR

SCALE: | SHEET OF SHEETS | STA. | TO STA.

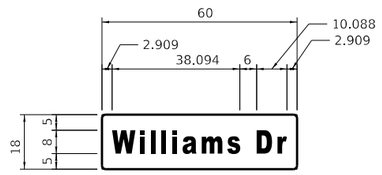
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	232
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

SIGN PANEL – TYPE 1 OR TYPE 2

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QUANTITY REQUIRED
D	8.25	1	ZZ	2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QUANTITY REQUIRED
D	7.5	1	ZZ	2

SCHEDULE OF QUANTITIES

	ITEM DECRIPTION	UNITS	TOTAL QTY.
	SIGN PANEL - TYPE 1	SQ FT	32
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	886
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	99
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	419
	HANDHOLE	EACH	5
	HEAVY-DUTY HANDHOLE	EACH	1
	DOUBLE HANDHOLE	EACH	2
	MAINTENANCE OF EXISTING FLASHING BEACON INSTALLATION	EACH	1
	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	421
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	693
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1107
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1118
	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	843
	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	370
	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	772
	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	4
	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	2
	CONCRETE FOUNDATION, TYPE A	FOOT	16
	CONCRETE FOUNDATION, TYPE C	FOOT	4
	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	22
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4
	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	5
	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1
	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	5
	INDUCTIVE LOOP DETECTOR	EACH	3
	DETECTOR LOOP, TYPE I	FOOT	239
	PEDESTRIAN PUSH-BUTTON	EACH	2
*	EMERGENCY VEHICLE PRIORITY SYSTEM	EACH	1
	REMOVE EXISTING FLASHING BEACON INSTALLATION COMPLETE	EACH	1
	RADAR VEHICLE DETECTION SYSTEM	EACH	1
	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
*	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	2

* 100% COST TO THE VILLAGE OF FRANKLIN PARK.

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SFILELSS		DRAWN - RM	REVISED -	**DEPARTMENT OF TRANSPORTATION**
DELTA ENGINEERING GROUP	PLOT SCALE = 40.0000 ' / in.	CHECKED - MA	REVISED -	
	PLOT DATE = 1/20/2022	DATE - 1/12/2022	REVISED -	

MAST ARM MOUNTED STREET NAME SIGNS & SCHEDULE OF QUANTITIES
FRANKLIN AVE & WILLIAMS DR

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	233
		CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

FRANKLIN AVE

172

173

174

175+00

176

177

SEE MATCHLINE AA BELOW

INDUSTRIAL PARK

FRANKLIN AVE

183

182

181

180+00

179

178

SEE MATCHLINE AA ABOVE

713

WILLIAMS DR

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	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

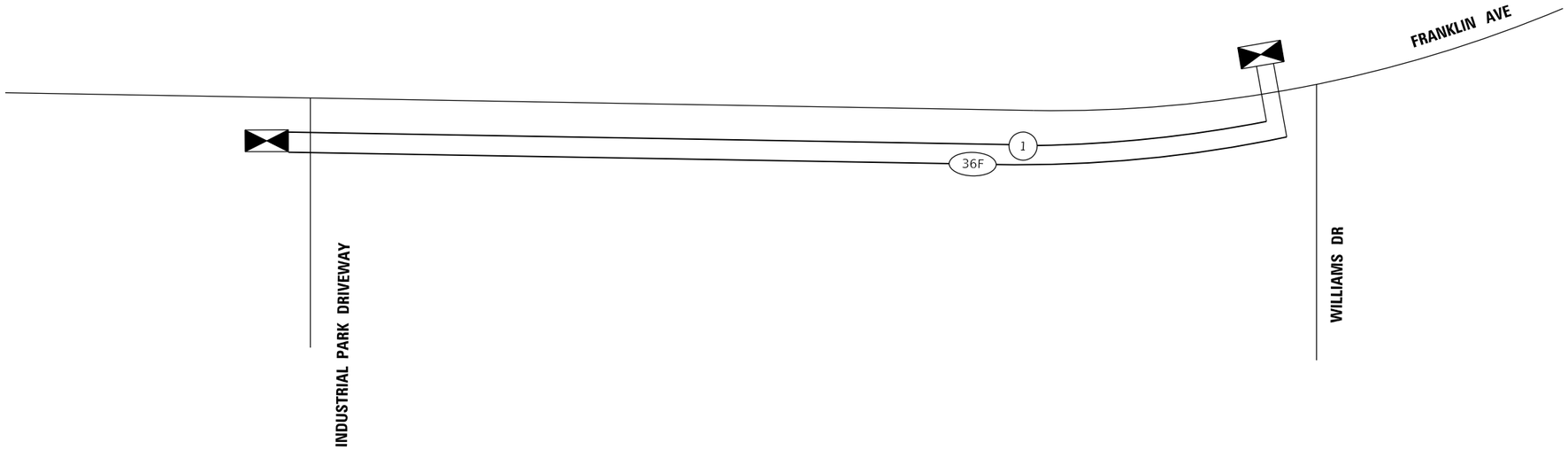
PR INTERCONNECT PLAN
INDUSTRIAL PARK TO WILLIAMS DR

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	234
		CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

SCHEDULE OF QUANTITIES

ITEM DECRIPTION	UNITS	TOTAL QTY.
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	1117
TRANSCEIVER - FIBER OPTIC	EACH	1
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	1152
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	1152
OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1



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DELTA ENGINEERING GROUP	PLOT SCALE = 40.0000 ' / in.	CHECKED - MA	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	235
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		

SYMBOLS LEGEND

- EXISTING LIGHTING UNIT TO REMAIN.
- EXISTING LIGHTING UNIT TO BE REMOVED, INCLUDING LUMINAIRE, POLE, MAST ARM, FOUNDATION ETC. (84200500), (84200804), (X1400341)
- NEW LIGHTING UNIT, 37 FT POLE, GROUND MOUNTED, MAST ARM LENGTH AS NOTED ON THE PLANS, LUMINAIRE MOUNTING HEIGHT 40 FT, WITH LED LUMINAIRE (83008300), (83008500), (83008600)
- NEW ROADWAY LIGHTING CONTROLLER, BASE MOUNTED, 240 VOLT, 200AMP (82500370)
- COMBINATION LIGHTING, MOUNTED ON SIGNALIZED INTERSECTION, MAST ARM LENGTH 12 FT, LUMINAIRE MOUNTING HEIGHT 40 FT, WITH LED LUMINAIRE (82110008), (X8301042), (Z0033020)
- A — UNIT DUCT, 600V, 2-1/C, NO. 2, 1/C NO. 4 GROUND, (XLP-TYPE USE), 1 ¼" DIA. (81603070)
- B — UNIT DUCT, 600V, 3-1/C, NO. 2, 1/C NO. 4 GROUND, (XLP-TYPE USE), 1 ¼" DIA. (81603080)
- C — UNIT DUCT, 600V, 3-1C NO.1, 1/C NO.1 GROUND, (XLP-TYPE USE), 2" DIA. POLYETHYLENE (81603115)
- UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 ½" DIA. OR 3" DIA. (81028210), (81028370).
- UNDERPASS LUMINAIRE, LED

S-FOR SINGLE, D-FOR DOUBLE
ARM MAST, X FT. LONG
NOMINAL MOUNTING HEIGHT, XX FT.
CIRCUIT NUMBER

SX-XX-C4
TYPE II

POLE DESIGNATION

LIGHT DISTRIBUTION TYPE

ABBREVIATIONS

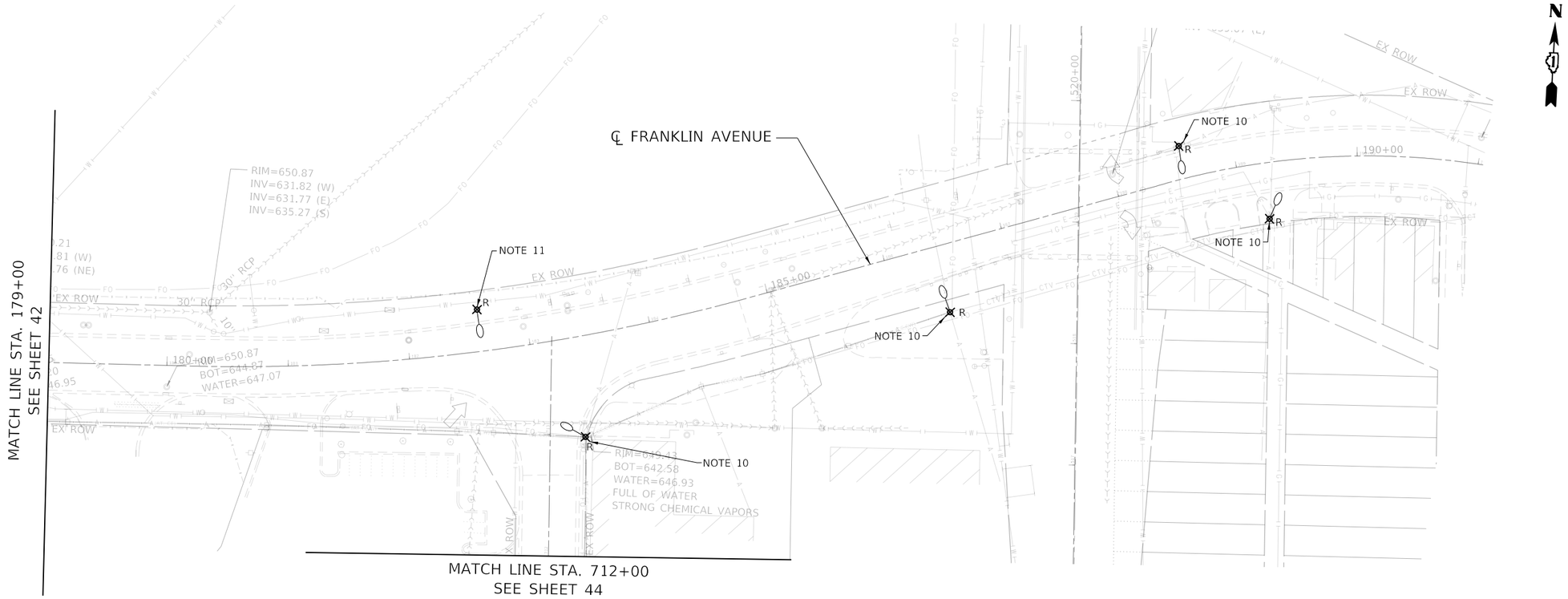
B.O.C	BACK OF CURB
E	EXISTING TO REMAIN
E.O.P.	EDGE OF PAVEMENT
FT	FEET OR FOOT
GND	GROUND
MA	MAST ARM
NO.	NUMBER
N.T.S.	NOT TO SCALE
P	PROPOSED
PVC	POLYVINYL CHLORIDE
RGS	RIGID GALVANISED STEEL
R	REMOVE
STA.	STATION
U.N.O.	UNLESS NOTED OTHERWISE

GENERAL NOTES:

1. ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST CODES, STANDARDS AND IDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED ON APRIL 1, 2016 AND SUPPLEMENT SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED ON JAN 1, 2021.
2. TRENCHED CONDUITS SHALL BE INSTALLED AT A MINIMUM 30" DEPTH BELOW GRADE AND POSITIONED IN THE FIELD TO AVOID CONFLICT WITH TREE ROOTS, ROADWAY SEWER DRAINS, SHEET PILING, AND OTHER EXISTING AND PROPOSED UTILITIES. THE CONTRACTOR SHALL INCREASE THE DEPTH OF TRENCH AND CONDUITS TO AVOID CONFLICTS AT NO ADDITIONAL COST TO THE TOLLWAY.
3. WHERE THE CONTRACTOR'S EXCAVATION MEETS AN OBSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR DIRECTION IN WRITING PRIOR TO FURTHER EXCAVATION. THE CONTRACTOR SHALL RESTORE ANY DAMAGE TO EXISTING SYSTEMS OR UTILITIES AND REMOVE EXISTING OBSTRUCTIONS AND FOUNDATIONS TO THE SATISFACTION OF THE ENGINEER.
4. EQUIPMENT GROUNDING CONDUCTORS SHALL BE SPLICED AND BONDED TO EACH STREET LIGHTING CONTROLLER TO EACH LIGHT POLE, AND TO ALL OTHER ITEMS OF EQUIPMENT. ALL ENCLOSURES SHALL BE EQUIPPED WITH GROUND LUGS FOR GROUND WIRE TERMINATION WITHOUT DEGRADATION OF THE ENCLOSURE RATING.
5. COORDINATE ALL WORK AND MATERIALS WITH SPECIAL ATTENTION TO ALL OTHER CONSTRUCTION CONTRACTS. THIS WORK SHALL BE INCLUDED IN THE COST OF THIS CONTRACT. NO SEPARATE PAYMENT WILL BE MADE FOR COORDINATION.
6. REFER TO THE CIVIL DRAWINGS AND ALSO VERIFY IN FIELD LOCATIONS OF EXISTING EQUIPMENT AND UTILITIES.
7. AT THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES, ELECTRICAL OR OTHERWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER OPERATION AND MAINTENANCE OF ALL EXISTING LIGHTING SYSTEMS.
8. WORK FOR ELECTRICAL SYSTEMS SHALL BE COMPLETE, APPROVED AND FULLY OPERATIONAL BEFORE A FINAL ACCEPTANCE INSPECTION FOR THE WHOLE PROJECT CAN BE SCHEDULED. LIGHTING MAINTENANCE RESPONSIBILITY WILL NOT BE TRANSFERRED TO THE VILLAGE PRIOR TO CONTRACT COMPLETION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
9. THE CONTRACTOR SHALL NOT DE-ENGERGIZE ANY EXISTING ELECTRICAL EQUIPMENT WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
10. THE ELECTRICAL CABLE CONDUCTORS SHALL BE RUN CONTINUOUS WITHOUT ANY UNDERGROUND SPLICES. SPLICING OF ELECTRIC CABLE CONDUCTORS WILL BE PERMITTED ONLY IN THE BASE OF THE PROPOSED LIGHT POLES, UNLESS NOTED OTHERWISE. THIS WORK SHALL BE INCLUDED IN THE ELECTRIC CABLE PAY ITEM. NO SEPARATE PAYMENT WILL NOT BE MADE FOR THIS WORK.
11. FURNISH AND INSTALL ALL LED LUMINAIRE IN ACCORDANCE WITH THE LUMINAIRE SUPPLIER RECOMMENDATIONS AND IN ACCORDANCE WITH THE SPECIFICATIONS. COORDINATE THE VOLTAGE, AND WATTAGE WITH THE LUMINAIRE SUPPLIER. THE COST OF THIS WORK SHALL BE INCLUDED IN THE LUMINAIRE PAY ITEM. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.
12. ALL NEW ELECTRICAL WORK SHALL BE COORDINATED WITH THE NEW CIVIL WORK THAT WILL BE DONE IN THE SAME AREA.
13. BEFORE INSTALLING LIGHT STANDARDS NEAR OVERHEAD UTILITIES, THE CONTRACTOR SHALL CONTACT THE UTILITY FOR APPROVAL OF LOCATION.
14. NO MATERIAL SHALL BE DELIVERED TO THE JOB SITE UNTIL ALL PERTINENT EQUIPMENT SUBMITTALS HAVE BEEN APPROVED BY THE ENGINEER.
15. LUMINAIRE AXES SHALL BE SET PARALLEL TO THE PAVEMENT ILLUMINATED BY THE LUMINAIRE. MAST ARMS SHALL BE AT RIGHT ANGLES TO THE CENTERLINE OF THE PAVEMENT TO BE ILLUMINATED.
16. CONTRACTOR SHALL DISCONNECT AND REMOVE THE EXISTING LIGHTING IN THE WORK ZONE AREAS. ALL LIGHTING OUTSIDE WORK ZONE AREAS SHALL REMAIN OPERATIONAL WHEN THE LIGHTING TO BE REMOVED IS DISCONNECTED.
17. DE-ENERGIZING OF EXISTING LIGHTING UNITS SHALL BE INCLUDED IN THE COST OF THE REMOVAL OF EXISTING LIGHTING SYSTEM PAY ITEM WORK, NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.
18. TRENCH AND BACKFILL FOR ELECTRICAL WORK SHALL BE INCLUDED IN THE COST OF UNIT DUCT. THE CONTRACTOR SHALL HAVE THE OPTION OF INSTALLING UNDERGROUND RACEWAYS AND UNIT DUCTS BY TRENCHING, PLOWING, BORING AND PULLING OR PUSHED THROUGH EXISTING PAVEMENT.
19. FURNISHING, INSTALLING AND TESTING OF GROUNDING SYSTEM WILL NOT BE PAID SEPARATELY, BUT THE COST SHALL BE INCLUDED IN THE COST OF THE ITEM FOR WHICH IT IS INSTALLED.

ROADWAY LIGHTING SUMMARY OF QUANTITY

PAYITEM	DESCRIPTION	UNIT	QTY
80400100	ELECTRIC SERVICE INSTALLATION	EACH	1
80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1
81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	1595
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	1275
81028770	UNDERGROUND CONDUIT, COILABLE NONMETALIC CONDUIT, 3" DIA.	FOOT	50
81100320	CONDUIT ATTACHED TO STRUCTURE, 1" DIA., PVC COATED GAVANIZED STEEL	FOOT	680
81100805	CONDUIT ATTACHED TO STRUCTURE, 3" DIA., PVC COATED GALVANIZED STEEL	FOOT	20
81300220	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 6" X 6" X 4"	EACH	14
81300530	JUCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 10" X 6"	EACH	2
81300830	JUCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 18" X 18" X 8"	EACH	2
81603070	UNIT DUCT, 600V, 2-1C NO.2, 1/C NO.4 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	3815
81603080	UNIT DUCT, 600V, 3-1C NO.2, 1/C NO.4 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	9080
81603115	UNIT DUCT, 600V, 3-1C NO.1, 1/C NO.1 GROUND, (XLP-TYPE USE), 2" DIA. POLYETHYLENE	FOOT	5600
81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	2040
81702190	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 4/0	FOOT	150
82110008	LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	83
82110022	LUMINAIRE LED, UNDERPASS, WALL MOUNT, OUPUT DESIGNATION E	EACH	14
82500370	LIGHTING CONTROLLER, BASE MOUNTED, 240VOLT, 200AMP	EACH	1
83008500	LIGHT POLE, ALUMINUM, 40 FT. M.H., 12 FT. MAST ARM	EACH	75
83008600	LIGHT POLE, ALUMINUM, 40 FT. M.H., 15 FT. MAST ARM	EACH	8
83600365	LIGHT POLE FOUNDATION, METAL, 15" BOLT CIRCLE, 10" X 8'	EACH	83
83800205	BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE	EACH	83
84200500	REMOVAL OF LIGHTING UNIT, SALVAGE	EACH	1
84200804	REMOVAL OF POLE FOUNDATION	EACH	7
X0327234	LIGHTING UNIT IDENTIFICATION DECAL	EACH	83
X1400341	REMOVAL OF LUMINARIE, SALVAGE	EACH	7
X8110462	CONDUIT ATTACHED TO STRUCTURE, 3" DIA., STAINLESS STEEL	FOOT	20
X8250510	LIGHTING CONTROLLER FOUNDATION	EACH	1
Z0033020	LUMINAIRE SAFETY CABLE ASSEMBLY	EACH	83
Z0033028	MAINTENANCE OF LIGHTING SYSTEM	CAL MO	6



NOTE:

1. CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND CONDITION OF THE STREET LIGHTING EQUIPMENT TO BE REMOVED IN THE PRESENCE OF THE ENGINEER AND NOTE ANY DEFECTIVE PART(S) PRIOR TO REMOVING ANY ITEM.

2. CONTRACTOR SHALL NOT DAMAGE ANY EQUIPMENT DURING THE REMOVAL OPERATION. IF ANY ITEM IS DAMAGED BY THE CONTRACTOR DURING THE REMOVAL, THE EQUIPMENT SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE ENGINEER.

3. REMOVE THE STREET LIGHTING EQUIPMENT SHOWN ON THE REMOVAL PLANS.

4. THE CONTRACTOR SHALL REMOVE ALL FIXTURES, POLES, MAST ARMS, CONTROLLER AND SERVICE EQUIPMENTS AS SHOWN ON THE PLANS.

5. THE CONTRACTOR SHALL DE-ENERGIZE THE EXISTING LUMINAIRE CIRCUIT AT THE LIGHTING CONTROLLER BEFORE REMOVAL.

6. EXISTING EMBEDDED AND UNDERGROUND RACEWAY BETWEEN EXISTING LIGHTING UNITS SHALL BE REMOVED OR MAY BE ABANDONED IN PLACE, UNLESS NOTED OTHERWISE.

7. THE EXISTING HELIX METAL FOUNDATION SHALL BE REMOVED. THE HOLE SHALL THEN BE BACKFILLED WITH APPROVED MATERIALS, GRADED TO MATCH THE PROPOSED TYPICAL SECTIONS.

8. CONTRACTOR SHALL CONTACT THE VILLAGE FOR DELIVERING THE FOLLOWING SALVAGE ITEMS TO A PLACE DESIGNATED BY THE VILLAGE ENGINEER.
   A. LIGHT POLES
   B. LUMINAIRES
   C. MAST ARMS
   D. LIGHTING CONTROLLER
   E. HELIX FOUNDATION.

9. COMED OVERHEAD LINES WILL BE RELOCATED BY COMED.

10. REMOVE EXISTING STREET LIGHT, CONSIST OF MAST ARM, AND LUMINAIRE FROM THE EXISTING UTILITY POLE. THIS WORK SHALL BE PAID BY PAY ITEM X1400341

11. REMOVE EXISTING LIGHTING UNIT, INCLUDING LUMINAIRE, POLE, MAST ARM, FOUNDATION ETC.

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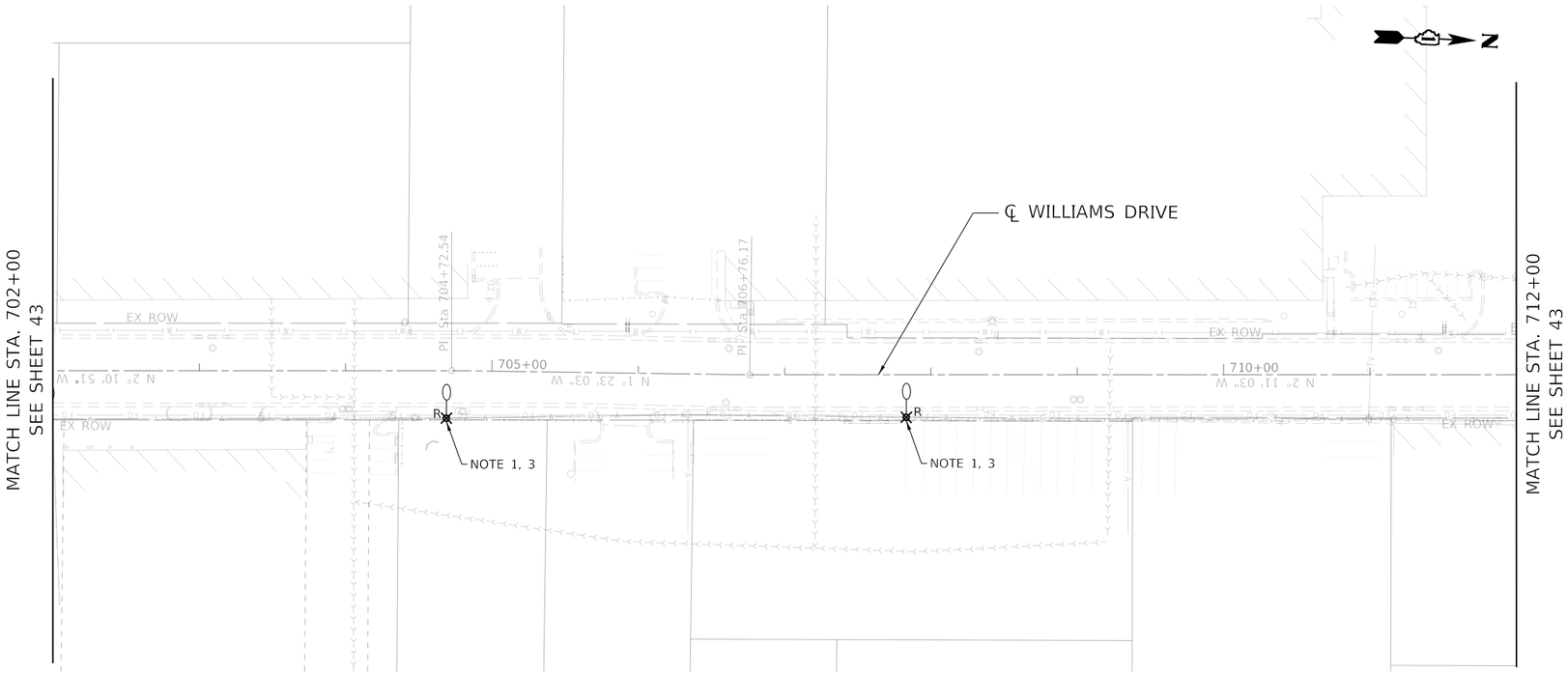
DELTA ENGINEERING GROUP		DRAWN - AM	REVISED -	
	PLOT SCALE = 100.0000 ' / in.	CHECKED - KK	REVISED -	
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -	

LIGHTING REMOVAL PLAN
FRANKLIN AVENUE

SCALE: 1"=50' | SHEET E-2 OF E-22 SHEETS | STA. 179+00 | TO STA. 190+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	237
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	



NOTE:

1. REMOVE EXISTING STREET LIGHT, CONSIST OF MAST ARM, AND LUMINAIRE FROM THE EXISTING UTILITY POLE. THIS WORK SHALL BE PAID BY PAY ITEM X1400341

2. REMOVE EXISTING LIGHTING UNIT, INCLUDING LUMINAIRE, POLE, MAST ARM, FOUNDATION ETC.

3. SEE NOTES ON SHEET E-1.

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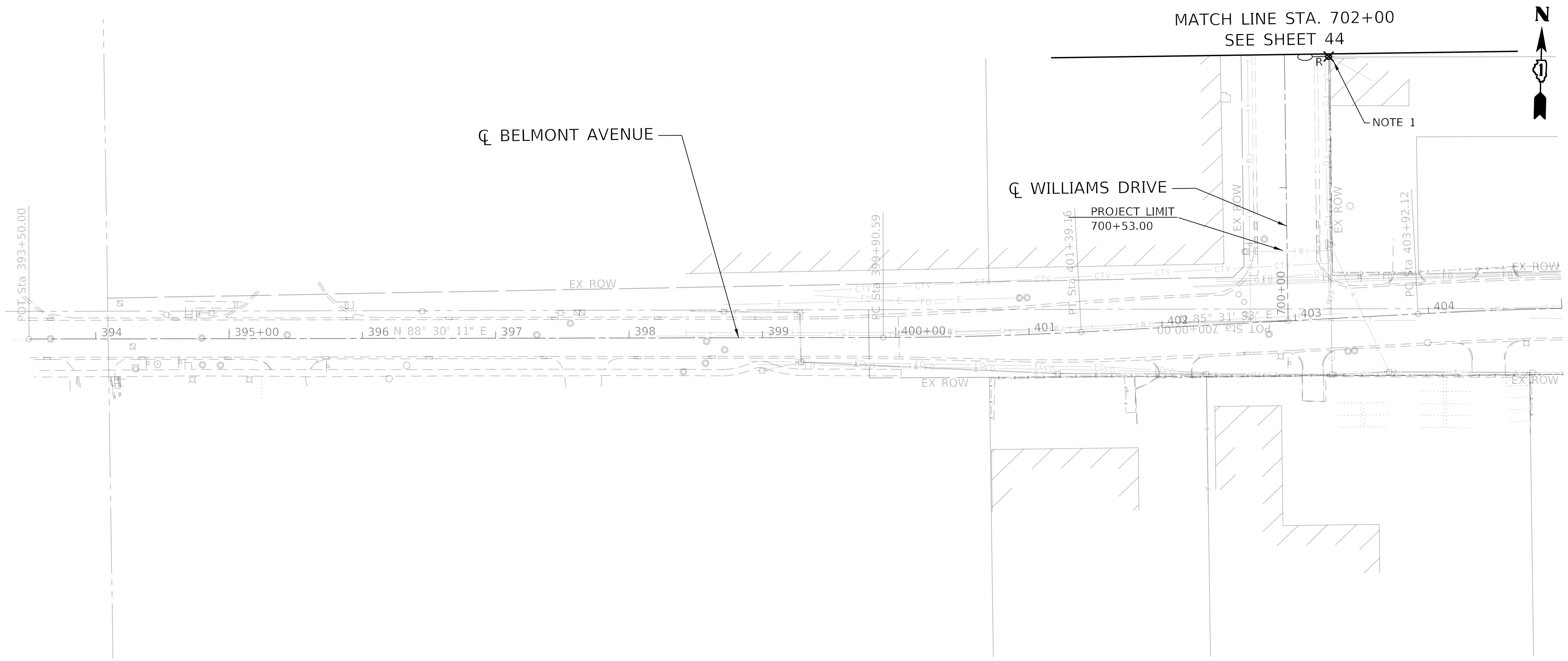
		DRAWN - AM	REVISED -
DELTA ENGINEERING GROUP	PLOT SCALE = 100.0000 ' / in.	CHECKED - KK	REVISED -
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING REMOVAL PLAN
WILLIAMS DRIVE

SCALE: 1"=50' | SHEET E-3 OF E-22 SHEETS | STA. 702+00 | TO STA. 712+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	238
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		



NOTE:

1. REMOVE EXISTING STREET LIGHT, CONSIST OF MAST ARM, AND LUMINAIRE FROM THE EXISTING UTILITY POLE. THIS WORK SHALL BE PAID BY PAY ITEM X1400341
2. REMOVE EXISTING LIGHTING UNIT, INCLUDING LUMINAIRE, POLE, MAST ARM, FOUNDATION ETC.
3. SEE NOTES ON SHEET E-1

MODEL: Default
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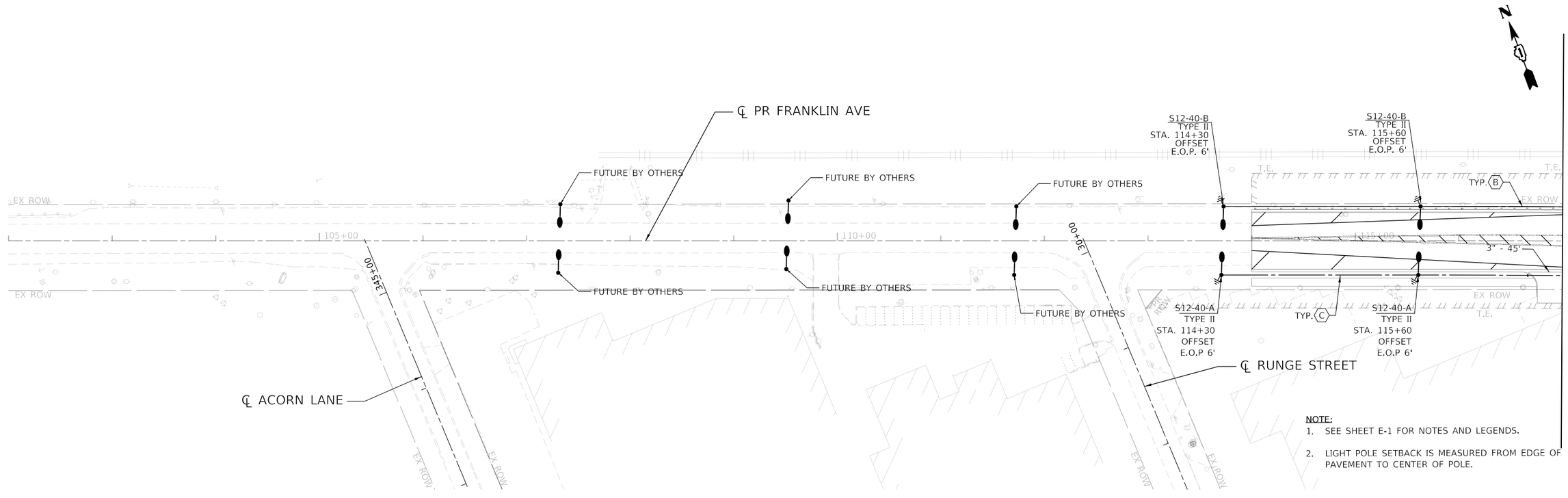
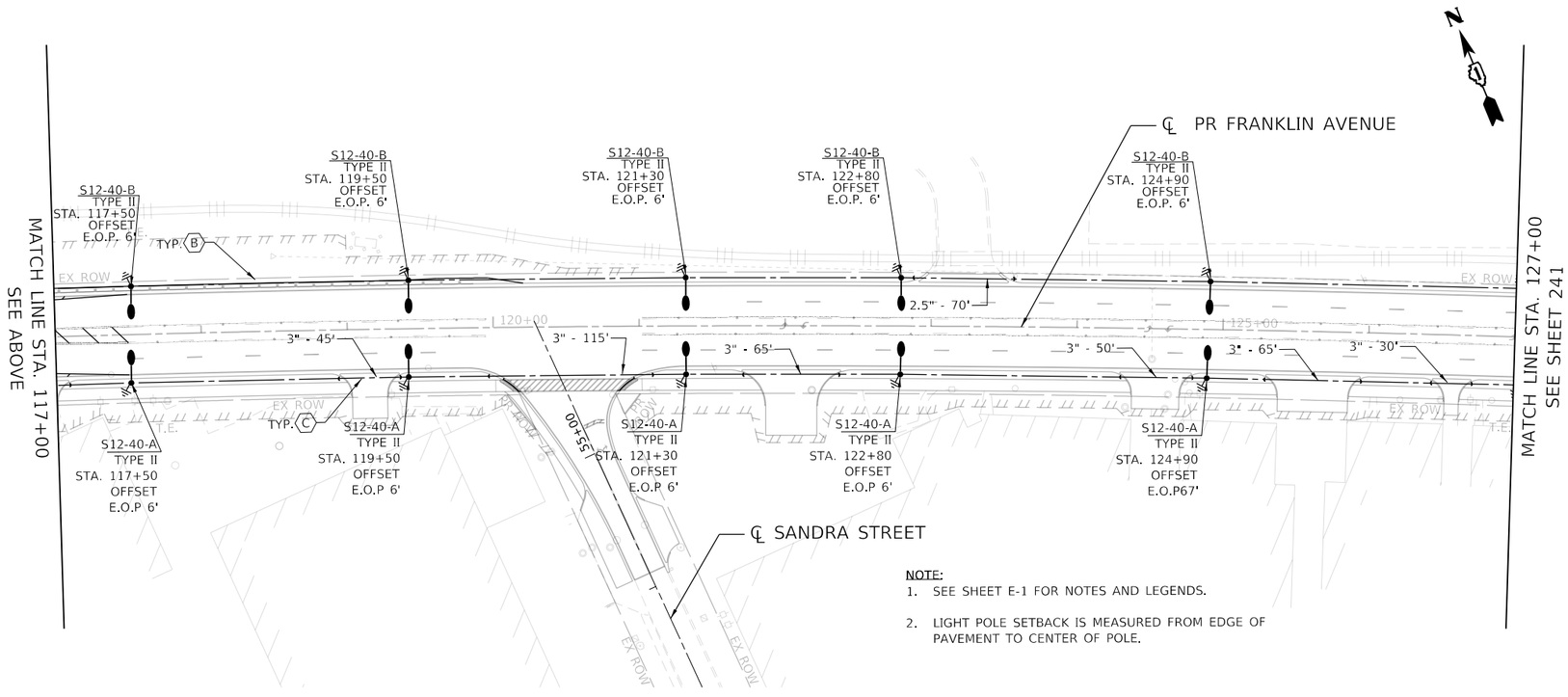
FILE NAME =	USER NAME = ZilmonA	DESIGNED - AM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING REMOVAL PLAN BELMONT AVENUE
$FILELS$		DRAWN - AM	REVISED -		
DELTA ENGINEERING GROUP	PLOT SCALE = 100.0000 ' / in.	CHECKED - KK	REVISED -		
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -		SCALE: 1"=50' SHEET E-4 OF E-22 SHEETS STA. 397+42 TO STA. 405+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	239
CONTRACT NO. 61H14				
ILLINOIS	FED. AID PROJECT			



NOTE:
1. SEE SHEET E-1 FOR NOTES AND LEGENDS.
2. LIGHT POLE SETBACK IS MEASURED FROM EDGE OF PAVEMENT TO CENTER OF POLE.



NOTE:
1. SEE SHEET E-1 FOR NOTES AND LEGENDS.
2. LIGHT POLE SETBACK IS MEASURED FROM EDGE OF PAVEMENT TO CENTER OF POLE.

MODEL: Default
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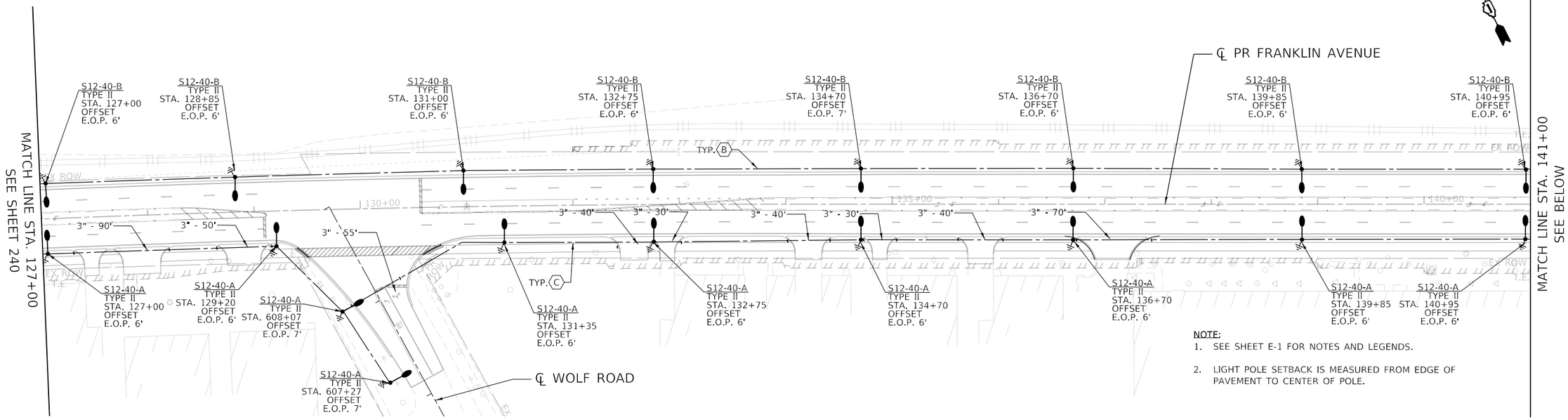
FILE NAME = D122318-sht-light-EXP-01.dgn	USER NAME = ZimonA	DESIGNED - TA	REVISED -
exp U.S. Services Inc. Chicago, IL BUILDINGS·EARTH & ENVIRONMENT·ENERGY INDUSTRIAL·INFRASTRUCTURE·SUSTAINABILITY		DRAWN - TA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - TA	REVISED -
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

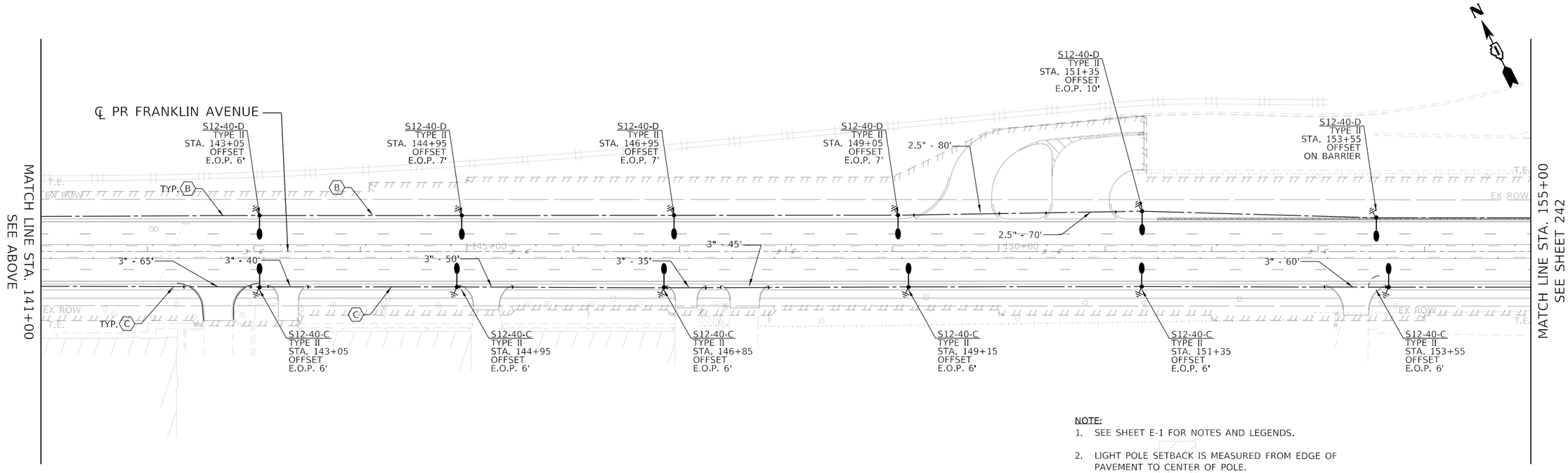
PROPOSED LIGHTING PLAN
FRANKLIN AVENUE

SCALE: 1"=50' | SHEET OF SHEETS | STA. 102+00 TO STA. 127+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	240
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	



NOTE:
1. SEE SHEET E-1 FOR NOTES AND LEGENDS.
2. LIGHT POLE SETBACK IS MEASURED FROM EDGE OF PAVEMENT TO CENTER OF POLE.



NOTE:
1. SEE SHEET E-1 FOR NOTES AND LEGENDS.
2. LIGHT POLE SETBACK IS MEASURED FROM EDGE OF PAVEMENT TO CENTER OF POLE.

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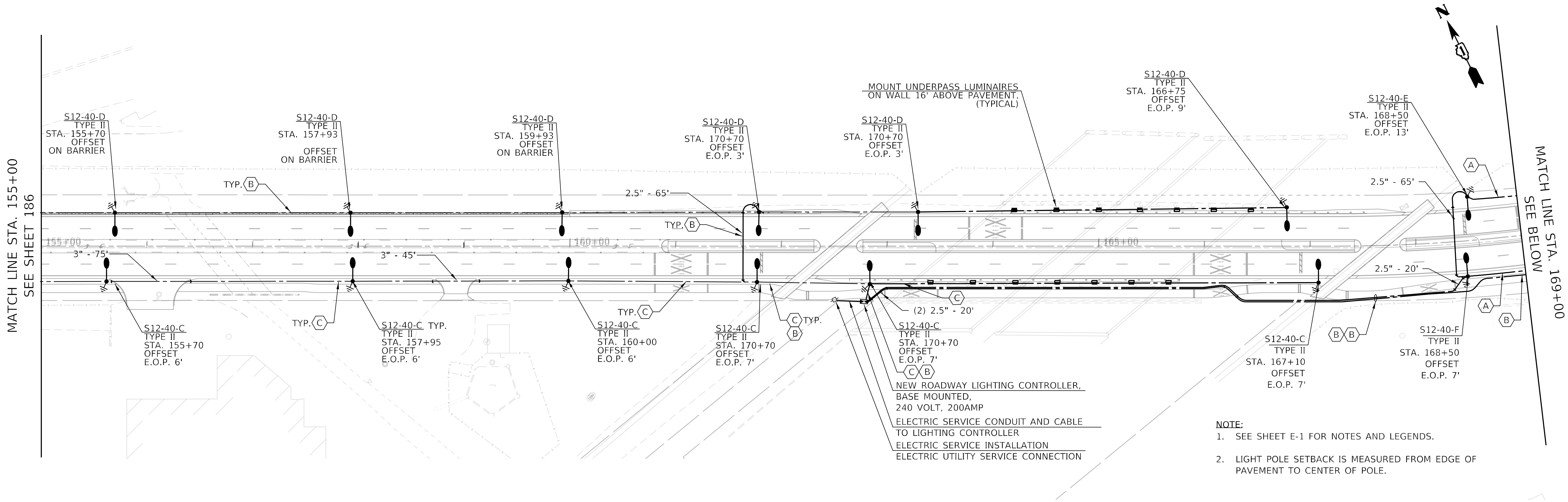
exp U.S. Services Inc. Chicago, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY		DRAWN - TA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - TA	REVISED -
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
FRANKLIN AVENUE

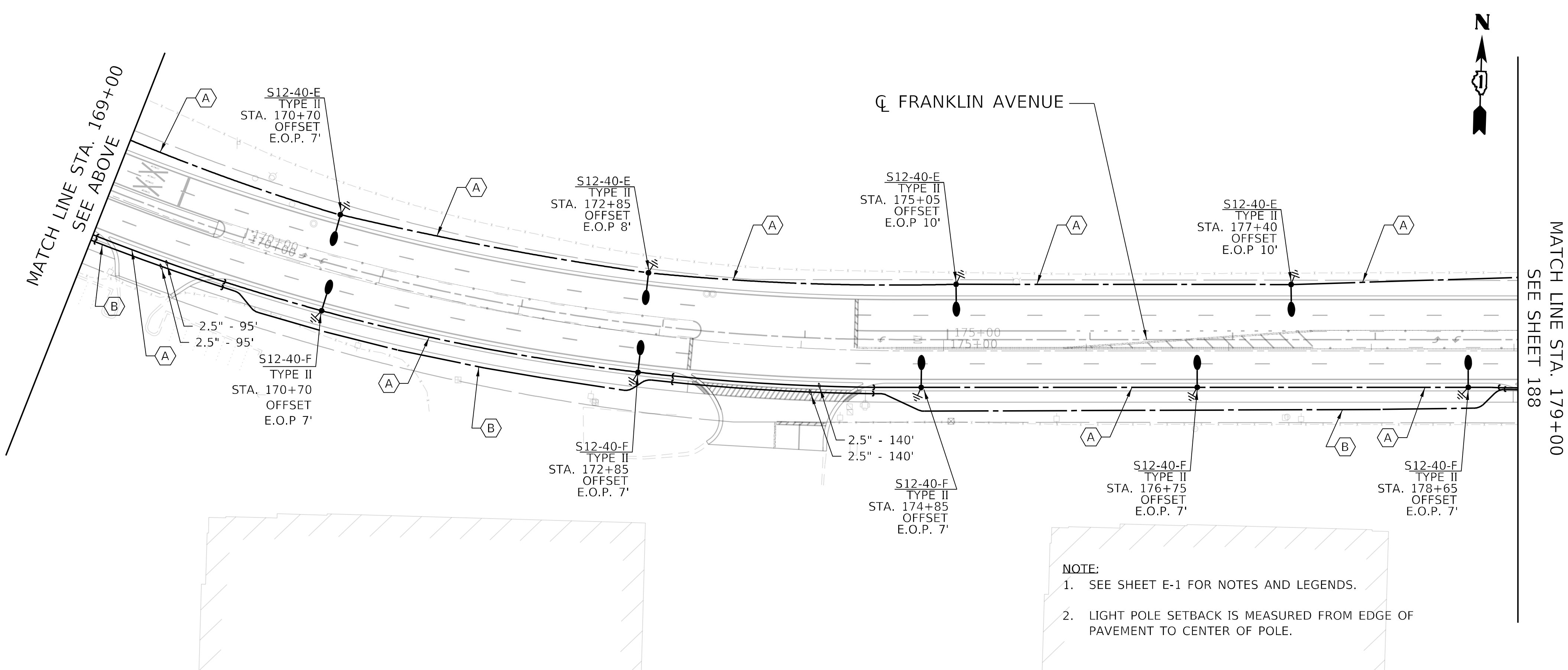
SCALE: 1"=50' | SHEET OF SHEETS | STA. 127+00 | TO STA. 155+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	241
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	



NOTE:

1. SEE SHEET E-1 FOR NOTES AND LEGENDS.
2. LIGHT POLE SETBACK IS MEASURED FROM EDGE OF PAVEMENT TO CENTER OF POLE.

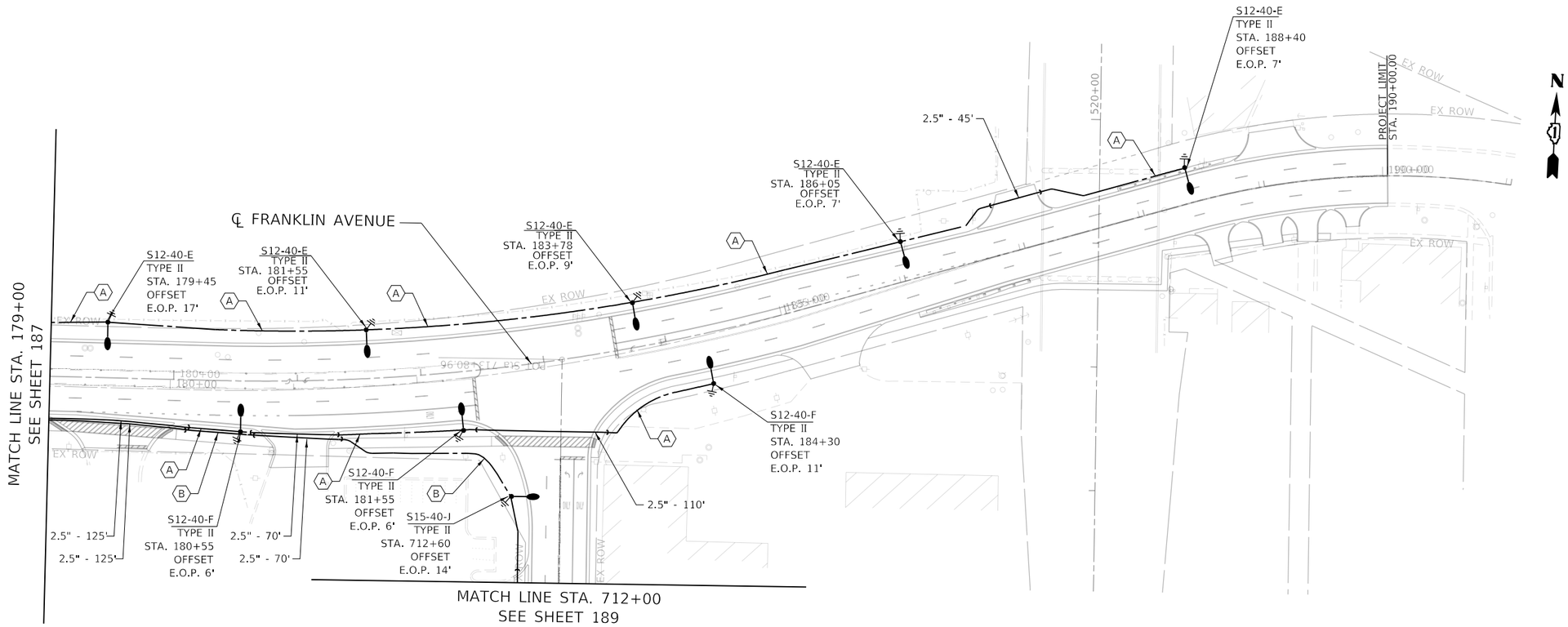


NOTE:

1. SEE SHEET E-1 FOR NOTES AND LEGENDS.
2. LIGHT POLE SETBACK IS MEASURED FROM EDGE OF PAVEMENT TO CENTER OF POLE.

FILE NAME =	USER NAME = ZimonA	DESIGNED - AM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED LIGHTING PLAN FRANKLIN AVENUE	F.A.U. RTE. 3533 / SECTION 17-00083-00-PV / COUNTY COOK / TOTAL SHEETS 421 / SHEET NO. 242
$FILEL$$		DRAWN - AM	REVISED -			CONTRACT NO. 61H14
DELTA ENGINEERING GROUP	PLOT SCALE = 100.0000 ' / in.	CHECKED - KK	REVISED -		SCALE: SHEET E-6 OF E-22 SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -			

MODEL: Default
FILE NAME: pw:\\exp-pw.bentley.com:exp-pw-01\Documents\Projects\CHI\00244802-A1\800 CADD Des\Jm803 Franklin-Williams Contract 61H14\803.04 Electrical\Sheet\D12231B-sht-ltg-04.dgn



NOTE:
1. SEE SHEET E-1 FOR NOTES AND LEGENDS.

2. LIGHT POLE SETBACK IS MEASURED FROM EDGE OF PAVEMENT TO CENTER OF POLE.

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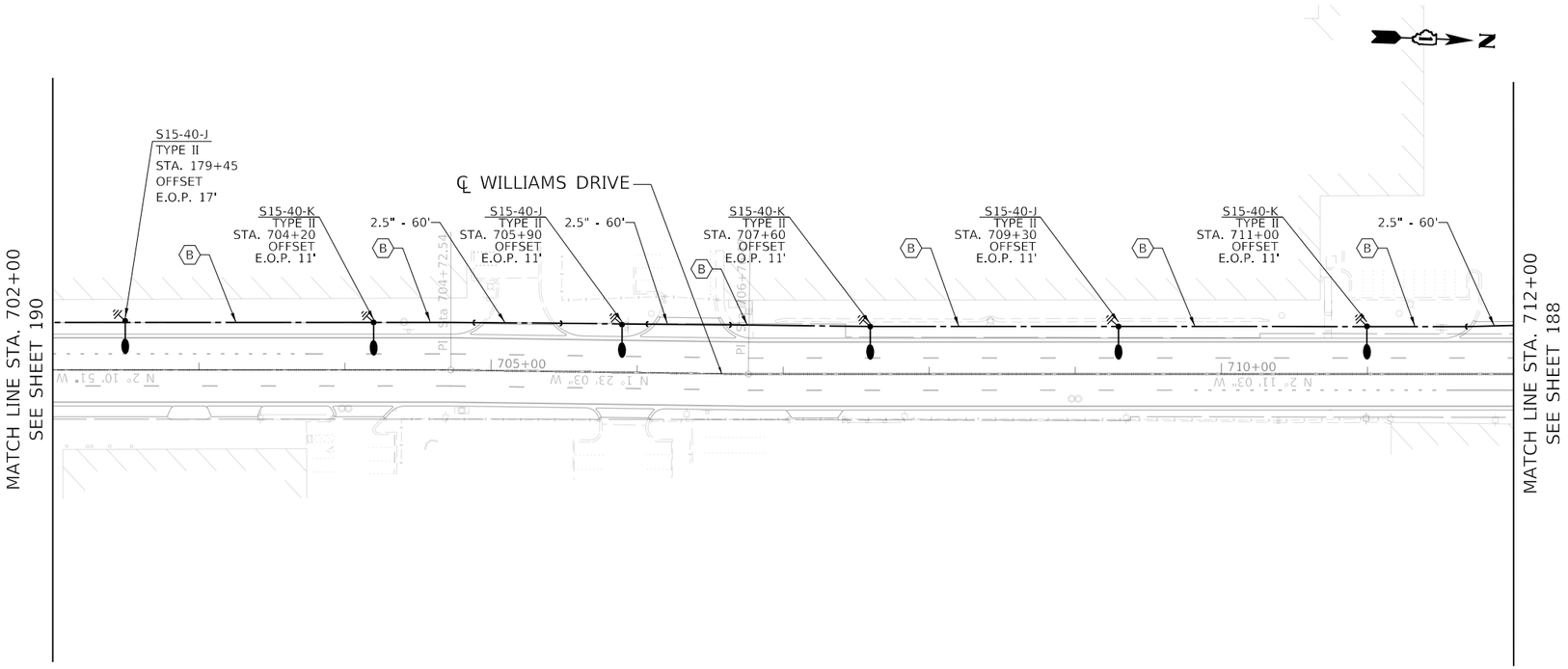
FILE NAME = $FILELS$	USER NAME = ZimonA	DESIGNED - AM	REVISED -
		DRAWN - AM	REVISED -
DELTA ENGINEERING GROUP	PLOT SCALE = 100.0000 ' / in.	CHECKED - KK	REVISED -
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
FRANKLIN AVENUE

SCALE: | SHEET E-7 OF E-22 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	243
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	



NOTE:
1. SEE SHEET E-1 FOR NOTES AND LEGENDS.

2. LIGHT POLE SETBACK IS MEASURED FROM EDGE OF PAVEMENT TO CENTER OF POLE.

MODEL: Default
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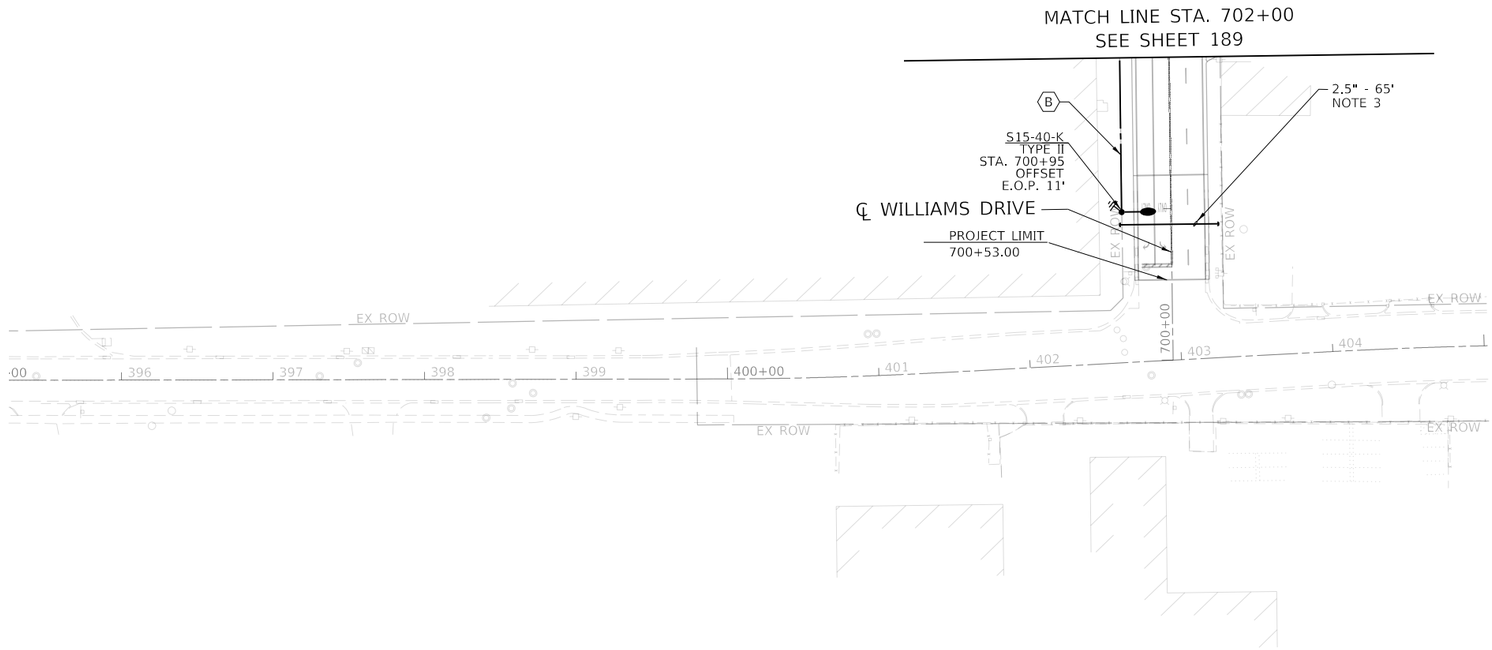
		DRAWN - AM	REVISED -
DELTA ENGINEERING GROUP	PLOT SCALE = 100.0000 ' / in.	CHECKED - KK	REVISED -
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
WILLIAMS DRIVE

SCALE: | SHEET E-8 OF E-22 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	244
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		



NOTE:

1. SEE SHEET E-1 FOR NOTES AND LEGENDS.
2. LIGHT POLE SETBACK IS MEASURED FROM EDGE OF PAVEMENT TO CENTER OF POLE.
3. CONTRACTOR SHALL CAP AND SEAL BOTH THE END OF THE CONDUIT FOR FUTURE USE.

MODEL: Default
FILE NAME: pw:\\wxp-pw.bentley.com:exp-pw-01\Documents\Projects\CH\00244802-A1800 CADD Design\803 Franklin-Williams Contract 61H14\803.04 Electrical\Sheet\D122318-sht-tfg-07.dgn

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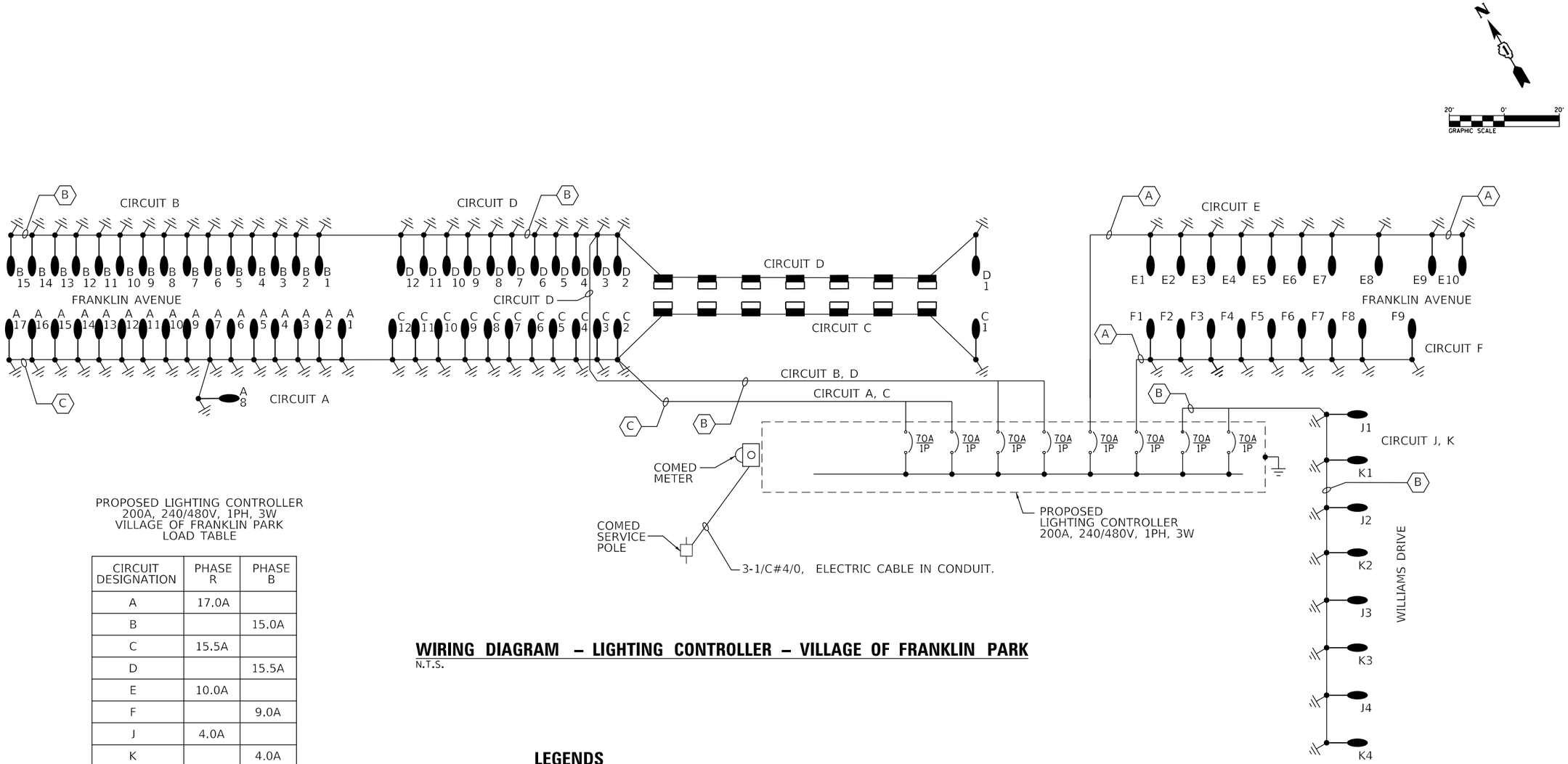
		DRAWN - AM	REVISED -
DELTA ENGINEERING GROUP	PLOT SCALE = 100.0000 ' / in.	CHECKED - KK	REVISED -
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
BELMONT AVENUE

SCALE: | SHEET E-9 OF E-22 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	245
		CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			



PROPOSED LIGHTING CONTROLLER
200A, 240/480V, 1PH, 3W
VILLAGE OF FRANKLIN PARK
LOAD TABLE

CIRCUIT DESIGNATION	PHASE R	PHASE B
A	17.0A	
B		15.0A
C	15.5A	
D		15.5A
E	10.0A	
F		9.0A
J	4.0A	
K		4.0A
TOTAL	46.5	44.5A

WIRING DIAGRAM – LIGHTING CONTROLLER – VILLAGE OF FRANKLIN PARK

N.T.S.

NOTES

1. FOR SYMBOLS AND GENERAL NOTES, SEE SHEET E-1.
2. THE PROPOSED LED TYPE II, 27000 LUMENS, LUMINAIRE LOAD HAS BEEN CALCULATED AT 1.00 AMPS/LUMINAIRE.
3. THE PROPOSED LED UNDERPASS LIGHT, 7200 LUMENS, LUMINAIRE LOAD HAS BEEN CALCUATED AT 0.5 AMPS/LUMINAIRE.

LEGENDS

NEW LIGHTING UNIT, 37 FT POLE, GROUND MOUNTED, MAST ARM LENGTH AS NOTED ON THE PLANS, LUMINAIRE MOUNTING HEIGHT 40 FT, WITH LED LUMINAIRE

UNDERPASS LUMINAIRE, LED

(A) UNIT DUCT, 600V, 2-1/C, NO. 2, 1/C NO. 4 GROUND, (XLP-TYPE USE), 1 ¼" DIA.

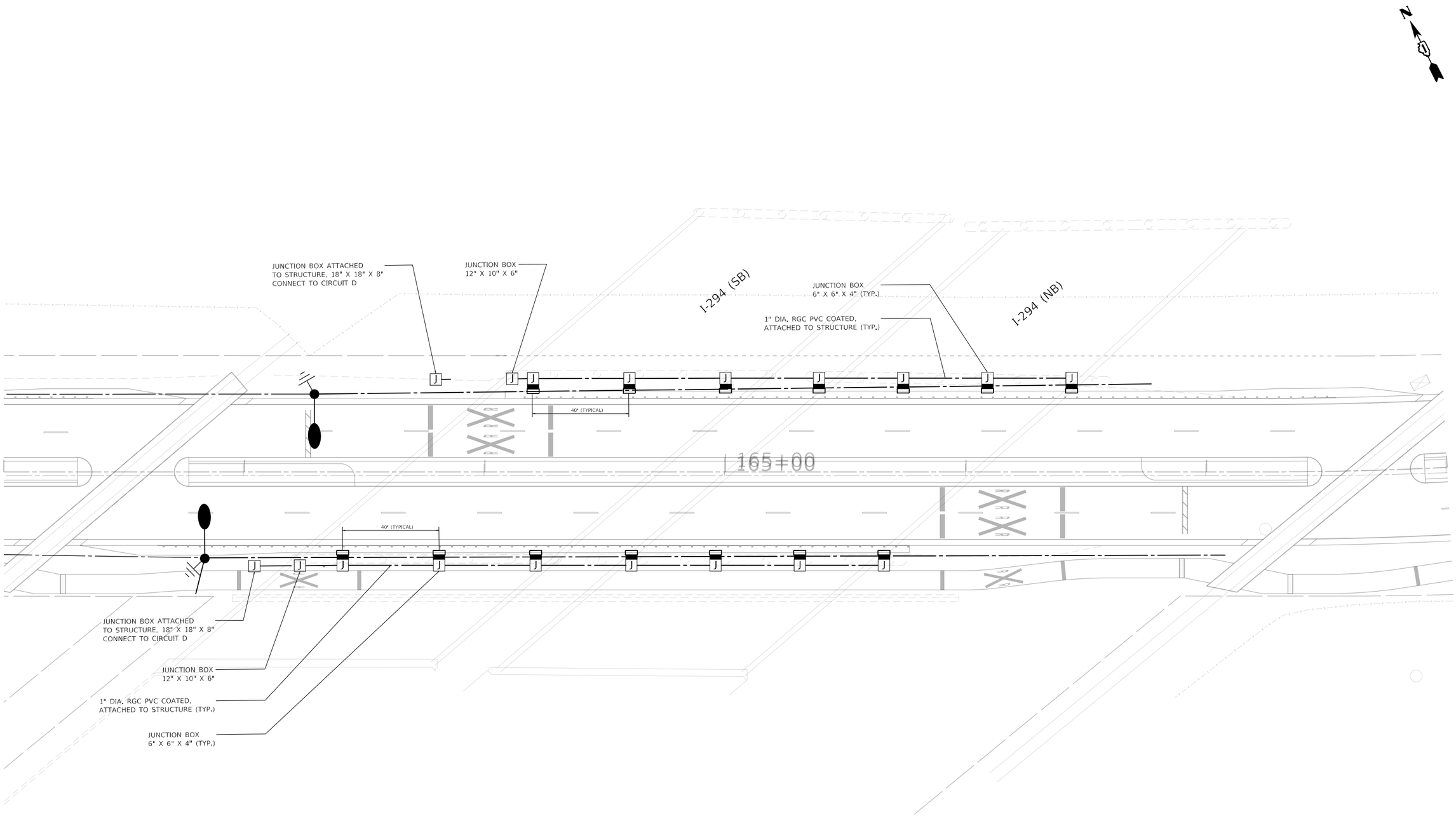
(B) UNIT DUCT, 600V, 3-1/C, NO. 2, 1/C NO. 4 GROUND, (XLP-TYPE USE), 1 ¼" DIA.

(C) UNIT DUCT, 600V, 3-1/C, NO. 1, 1/C NO. 1 GROUND, (XLP-TYPE USE), 2" DIA.

MODEL: Default
FILE NAME: pw:\\cvgs-pw.bentley.com:cvgs-pw-01\Documents\Projects\CHI\00244802-A1\800 CADD Design\803 Franklin-Williams Contract 61H14\803.04 Electrical\Sheets\D122318-sht-Hts-d8.dgn

FILE NAME = $FILELS$	USER NAME = ZimonA	DESIGNED - AM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED SINGLE LINE DIAGRAM FRANKLIN PARK
DELTA ENGINEERING GROUP		DRAWN - AM	REVISED -		
	PLOT SCALE = 40.0000 ' / in.	CHECKED - KK	REVISED -		SCALE: SHEET E-11 OF E-22 SHEETS STA. TO STA.
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	246
		CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			



NOTES:
1. SEE IDOT STANDARD SHEET BE-903 FOR PROPOSED UNDERPASS LUMINAIRE INSTALLATION DETAILS.
2. INSTALL NEW FUSE HOLDERS, 30 AMP FUSES, AND NEUTRAL SLUG INSIDE JUNCTION BOX.

MODEL: Default
FILE NAME: pw:\\exp-pw.bentley.com:exp-pw-01\Documents\Projects\CHI\00244802-A1\800 CADD Design\803 Franklin-Williams Contract 61H14\803_04 Electrical\Sheet\D122318-sht-ltg-underpass-01.dgn

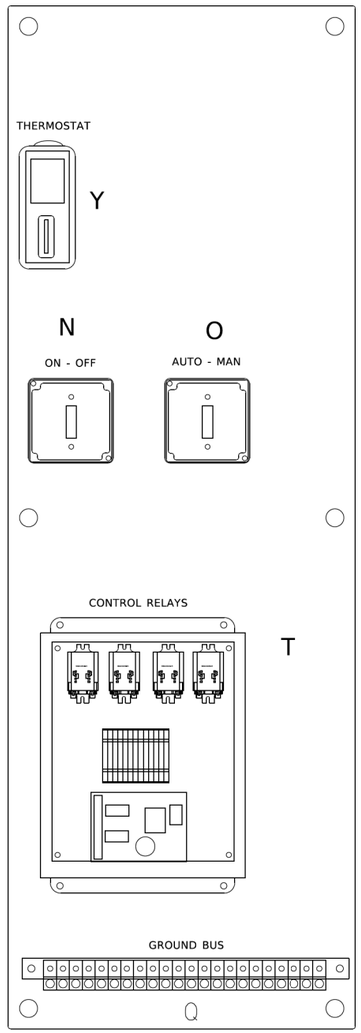
FILE NAME = D122318-sht-ltg-underpass-01.dgn	USER NAME = ZimonA	DESIGNED - TA	REVISED -
exp U.S. Services Inc. Chicago, IL BUILDINGS·EARTH & ENVIRONMENT·ENERGY INDUSTRIAL·INFRASTRUCTURE·SUSTAINABILITY		DRAWN - TA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - TA	REVISED -
	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

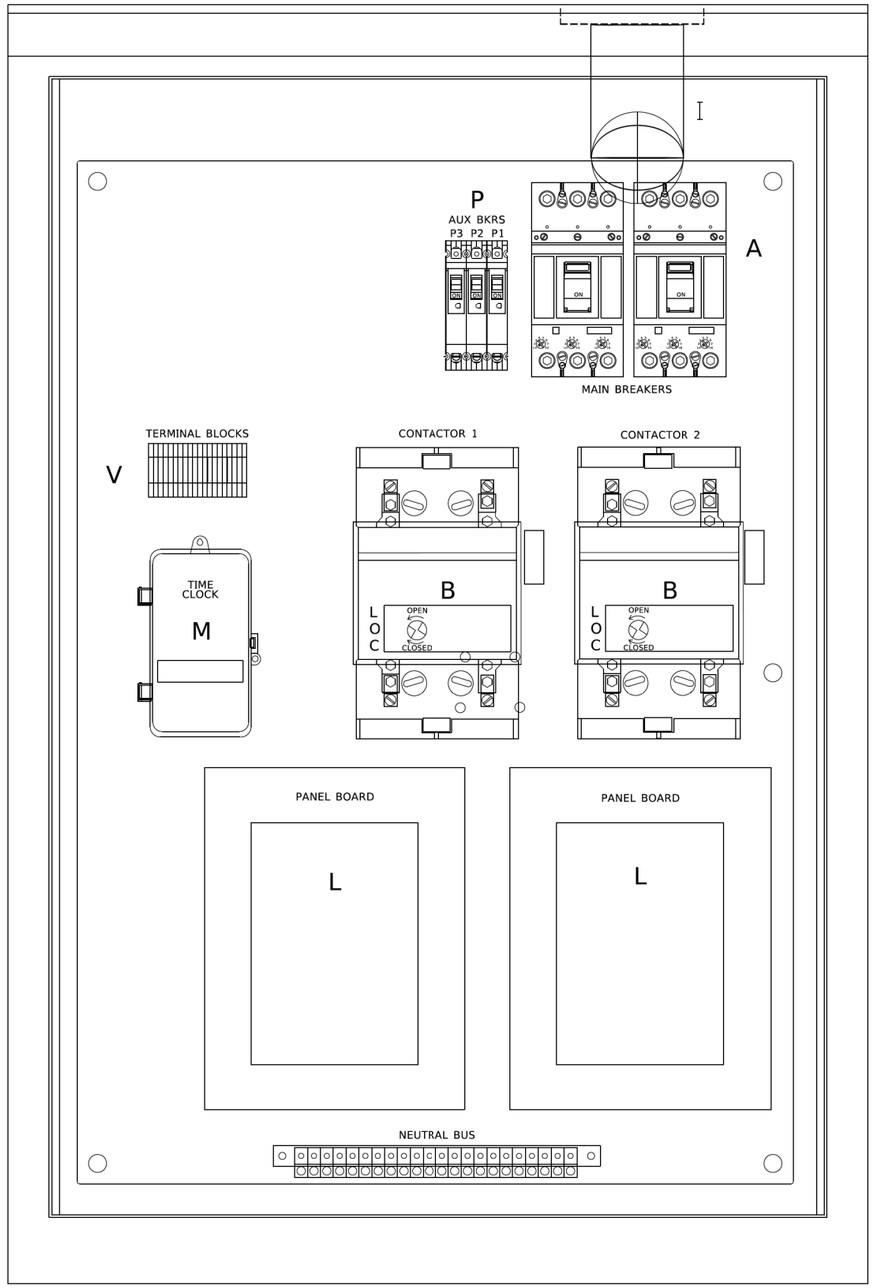
PROPOSED UNDERPASS LIGHTING PLAN
FRANKLIN AVENUE

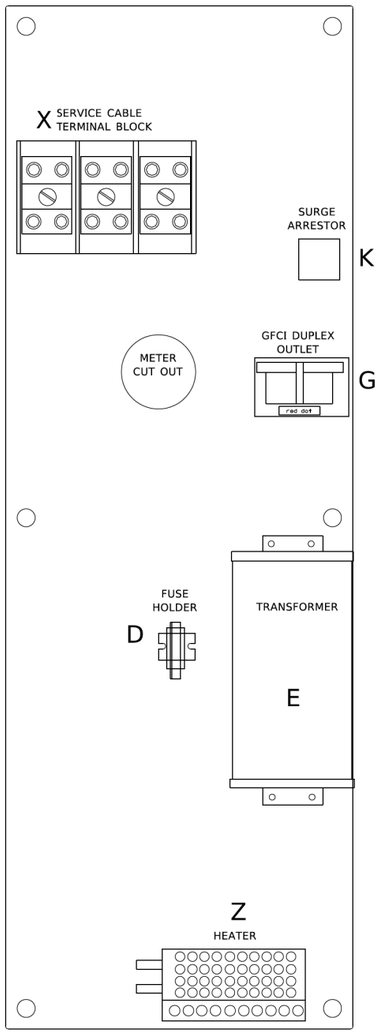
SCALE: | SHEET E-12 OF E-22 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	247
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		



LEFT SIDE PANEL





RIGHT SIDE PANEL

BILL OF MATERIALS

ITEM *	QTY	DESCIPTION
A	2	MAIN BREAKERS 2 POLE 200 AMP WITH AUX CONTACT
B	2	MECHANICAL CONTRACTOR 2 POLE 200 AMP 240V COIL WITH AUX CONTACTS
D	1	SECTIONAL FUSE HOLDER
E	1	2.0 KVA 277V-240/120 TRASFORMER
G	1	15 AMP GFCI
H	2	DOOR SWITCH
I	1	LIGHT FIXTURE
J	1	METER FITTING 1 PHASE 3 WIRE 200 AMP
K	1	SURGE ARRESTER
L	2	PANEL BOARD 480/240V 1 PHASE, 250 AMP COPPER BUS
M	1	2 CHANNEL DIGITAL TIME CLOCK
N	1	MOMENTARY SWITCH ON - OF
O	1	DPDT 20 AMP AUTO-MANUAL
P1	1	BREAKER 1P 15A
P2	1	BREAKER 1P 15A
P3	1	BREAKER 1P 15A
Q	2	COPPER GROUND AND NEUTRAL BUS 1 X 16 X ¼
T	1	CONTROL RELAY ASSEMBLY 240V COILS WITH DPDT 25 AMP RELAYS (R1,R2,R3,R4). MOMENTARY CONTACT ADAPTER. QTY 12 TERMINAL BLOCKS
V	20	TERMINAL BLOCKS
X	1	620 AMP SPLICE BLOCK
Y	1	CHROMALOX WR 80, 40-80 DEG THERMOSTAT
Z	1	HEATREX 276-10 375 WATT HEATER

*

E–200

MODEL: Default
FILE NAME: pw:\\dalnroom.dot.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist\Std22x34\CADData\CADsheets\be200.dgn

DELTA ENGINEERING GROUP

USER NAME = footemj	DESIGNED -	REVISED - R. TOMSONS 03-29-12
	DRAWN - CADD	REVISED -
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 4/19/2019	DATE - 12-18-02	REVISED -

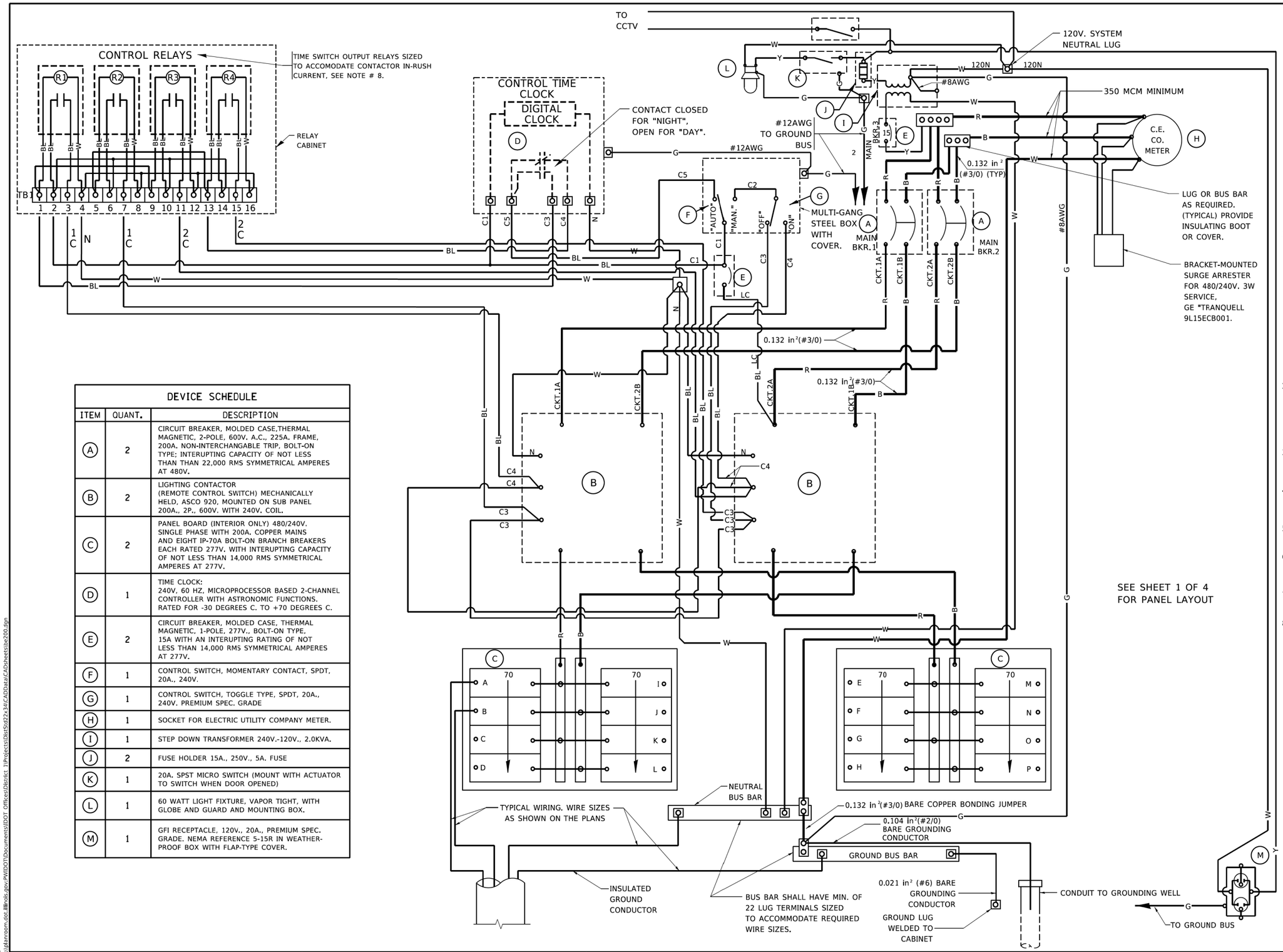
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER, BASE MOUNTED
480 VOLT, 200 AMP, (DUAL)

SCALE: NONE | SHEET E-13 OF E-22 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	248
	E–200 (BE–200)	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

be200.dgn 4/19/2019 2:01:25 PM User=footemj



DEVICE SCHEDULE

ITEM	QUANT.	DESCRIPTION
(A)	2	CIRCUIT BREAKER, MOLDED CASE,THERMAL MAGNETIC, 2-POLE, 600V. A.C., 225A. FRAME, 200A. NON-INTERCHANGABLE TRIP, BOLT-ON TYPE; INTERUPTING CAPACITY OF NOT LESS THAN THAN 22,000 RMS SYMMETRICAL AMPERES AT 480V.
(B)	2	LIGHTING CONTACTOR (REMOTE CONTROL SWITCH) MECHANICALLY HELD, ASCO 920, MOUNTED ON SUB PANEL 200A., 2P., 600V. WITH 240V. COIL.
(C)	2	PANEL BOARD (INTERIOR ONLY) 480/240V. SINGLE PHASE WITH 200A. COPPER MAINS AND EIGHT IP-70A BOLT-ON BRANCH BREAKERS EACH RATED 277V. WITH INTERUPTING CAPACITY OF NOT LESS THAN 14,000 RMS SYMMETRICAL AMPERES AT 277V.
(D)	1	TIME CLOCK: 240V, 60 HZ, MICROPROCESSOR BASED 2-CHANNEL CONTROLLER WITH ASTRONOMIC FUNCTIONS. RATED FOR -30 DEGREES C. TO +70 DEGREES C.
(E)	2	CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, 1-POLE, 277V., BOLT-ON TYPE, 15A WITH AN INTERUPTING RATING OF NOT LESS THAN 14,000 RMS SYMMETRICAL AMPERES AT 277V.
(F)	1	CONTROL SWITCH, MOMENTARY CONTACT, SPDT, 20A., 240V.
(G)	1	CONTROL SWITCH, TOGGLE TYPE, SPDT, 20A., 240V. PREMIUM SPEC. GRADE
(H)	1	SOCKET FOR ELECTRIC UTILITY COMPANY METER.
(I)	1	STEP DOWN TRANSFORMER 240V.-120V., 2.0KVA.
(J)	2	FUSE HOLDER 15A., 250V., 5A. FUSE
(K)	1	20A. SPST MICRO SWITCH (MOUNT WITH ACTUATOR TO SWITCH WHEN DOOR OPENED)
(L)	1	60 WATT LIGHT FIXTURE, VAPOR TIGHT, WITH GLOBE AND GUARD AND MOUNTING BOX.
(M)	1	GFI RECEPTACLE, 120V., 20A., PREMIUM SPEC. GRADE. NEMA REFERENCE 5-15R IN WEATHER-PROOF BOX WITH FLAP-TYPE COVER.

NOTES:

1. ALL CONTROL CABINET ITEMS SHALL HAVE SUITABLE IDENTIFICATION. OPEN CIRCUIT BREAKERS, CONTACTORS AND OTHER OPEN DEVICES SHALL HAVE PERMANENT SELF STICKING TAGS. DEVICES IN ENCLOSURES SHALL HAVE ENGRAVED 2-COLOR LAMINATED PLASTIC NAMEPLATES ATTACHED TO ENCLOSURES WITH SCREWS. NAMEPLATES SHALL BE ENGRAVED TO CORRESPOND TO DESIGNATIONS ON THE DRAWINGS. INTERNAL CABINET WIRING SHALL BE IDENTIFIED AS INDICATED OR AS DIRECTED BY THE ENGINEER BY MEANS OF SELF-STICKING TAGS APPLIED AT EACH CONNECTED END. IDENTIFICATION SHALL BE MADE BY THE CABINET MANUFACTURER.
2. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED.

   R = RED Y = YELLOW
   B = BLACK W = WHITE
   BL = BLUE G = GREEN
3. PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
4. ALL 120 VOLT SYSTEM AND ALL CONTROL WIRING SHALL BE #12AWG STRANDED UNLESS OTHERWISE INDICATED.
5. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
6. THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL"
7. SEE CABINET AND FOUNDATION DETAIL SHEET FOR SCHEMATIC DIAGRAM AND DEVICE LAYOUT.
8. CONTROL RELAYS CAN BE ELIMINATED IF THE CONTROL TIME CLOCK OUTPUT CONTACTS ARE RATED FOR CONTACTOR INRUSH CURRENT.

E–200

DELTA ENGINEERING GROUP

USER NAME = footemj	DESIGNED - G. BRATKIV	REVISED - M. BURNS 07-25-91	
	DRAWN -	REVISED - S. MANLEY 10-11-93	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - R. TOMSONS 03-29-12	
PLOT DATE = 4/19/2019	DATE - 06-30-86	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER, BASE MOUNTED
480 VOLT, 200 AMP, (DUAL)

SCALE: NONE | SHEET E-14 OF E-22 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	249
	E–200 (BE–200)	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
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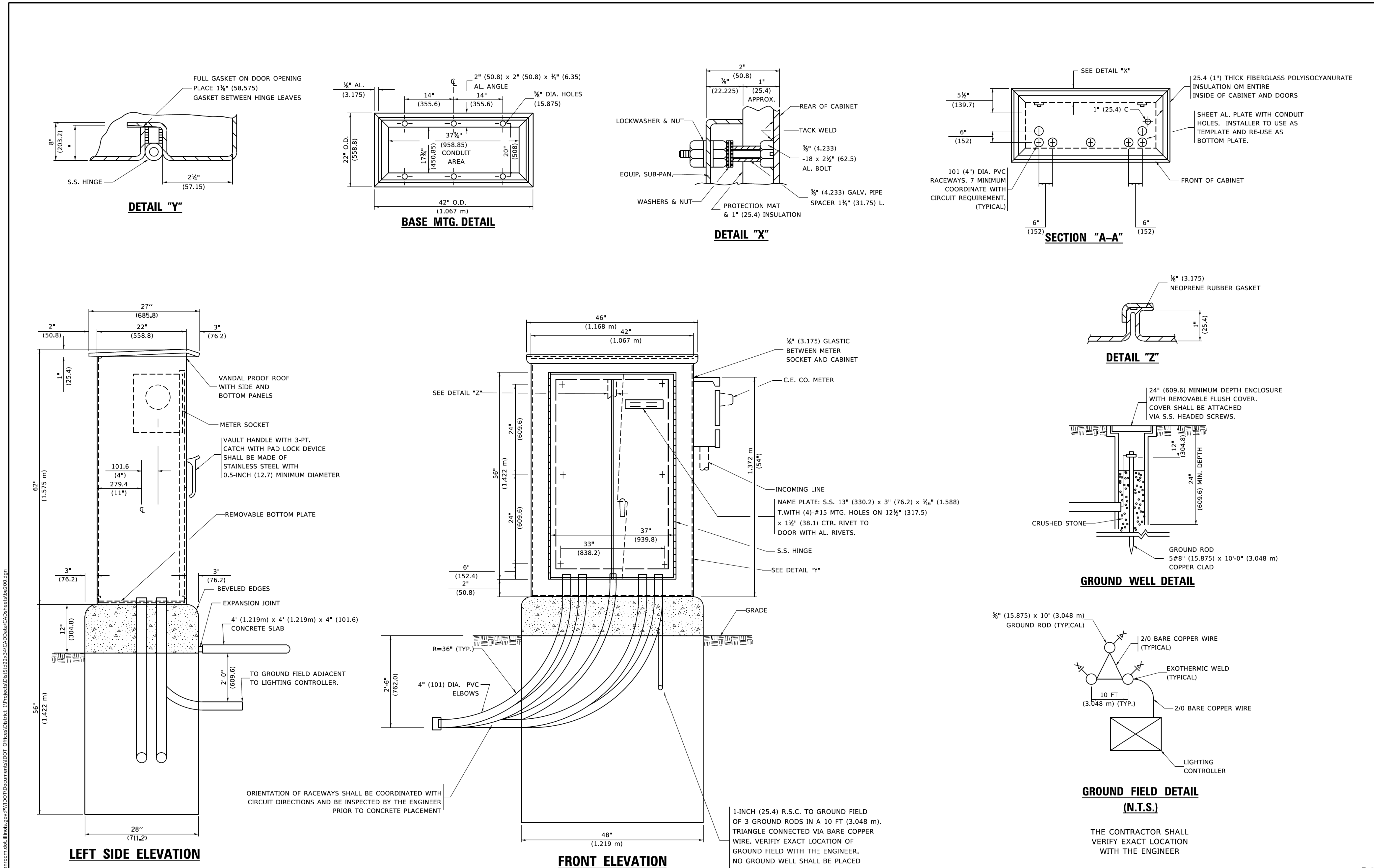


E–200

DELTA ENGINEERING GROUP	USER NAME = footemj	DESIGNED -	REVISED - R. TOMSONS 03-29-12	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING CONTROLLER, BASE MOUNTED 480 VOLT, 200 AMP, (DUAL)
		DRAWN - CADD	REVISED -		
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -		
	PLOT DATE = 4/19/2019	DATE - 12-18-02	REVISED -		SCALE: NONE SHEET E-15 OF E-22 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	250
E–200 (BE–200)		CONTRACT NO. 61H14		
		ILLINOIS FED. AID PROJECT		

MODEL: Default
FILE NAME: pw:\\plamroom.dot.illinois.gov:PWIDOT01\Documents\IDOT Offices\District 1\Projects\Dist5d22x34\CADData\CADSheets\be200.dgn

NOTES:

1. CABINET SHALL BE FABRICATED FROM 0.125-INCH (3.175) SHEET ALUMINUM #3003H14, FORMED AND ARC WELDED ASSEMBLY.
2. ALL SCREWS AND HARDWARE SHALL BE PLATED, GALVANIZED, OR MADE OF BRASS, ALUMINUM OR STAINLESS STEEL.
3. NAME PLATE SHALL HAVE ENGRAVED 0.75-INCH (19.05) HIGH LETTERS FILLED IN BLACK: "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.
4. ONE INCH THICK POLYISOCYANURATE INSULATION SHALL BE INSTALL AND PERMANENTLY CEMENTED ON ALL SIDES OF THE CABINET AND DOORS.
5. CABINET SHALL BE PRIMED AND PAINTED AS SPECIFIED.
6. ELECTRIC UTILITY METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET AS SHOWN ON THE PANEL LAYOUT DIAGRAM.
7. THE COMPLETED CONTROLLER SHALL BE U.L. LISTED AS AN INDUSTRIAL CONTROL PANEL UNDER UL508.
8. METAL MOUNTING PANEL SHALL BE #10 GAUGE GALVANIZED SHEET STEEL FLANGED BACK 0.75-INCHES I.D. ON 4 SIDES.
9. CIRCUIT BREAKERS AND CONTACTORS AND OTHER COMPONENTS SHALL BE MOUNTED ON 0.125-INCH (3.175) THICK GLASTIC INSULATION BACK PANEL.
10. ALL DEVICES SHALL BE FRONT REMOVABLE.
11. TIME CLOCK CHANNEL 1 N.O. CONTACT IS CLOSED NIGHT AND OPEN DAY.
12. SET "ON TIME" TO 30 MINUTES AFTER ASTRONOMICAL SUNSET.
13. BUS BAR SHALL HAVE 22 LUG TERMINALS SIZED TO ACCOMMODATE REQUIRED WIRE SIZES. NEUTRAL BUS SHALL BE PAINTED WHITE. GROUND BUS SHALL BE PAINTED GREEN.
14. ALL LUGS SHALL BE OF COPPER SCREWS AND CONNECTORS, SPRING HELD.
15. ALL WIRING TERMINATIONS SHALL BE RATED NOT LESS THAN 75 DEGREE CENTIGRADE.
16. ALL CONTROL WIRING SHALL BE 600V MACHINE TOOL WIRE TYPE MTW.
17. ALL POWER WIRING SHALL BE 600V TYPE RHH/RHW.
18. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:

    R - RED Y - YELLOW
    B - BLACK W - WHITE
    BL - BLUE G - GREEN

19. ALL DIMENSIONS ARE IN MILIMETERS (INCHES) UNLESS OTHERWISE INDICATED.
20. SCHEMATIC SHOWN WITH BREAKER OPEN, CONTACTOR OPEN, CABINET DOOR CLOSED, CLOCK NOT ACTIVE.
21. A LAMINATED COPY OF THE CIRCUIT SCHEMATIC AND SCADA I/O DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE CONTROLLER.

MODEL: Default
FILE NAME: pw:\\planroom.dot.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Std22x34\CADData\CADsheets\be200.dgn

DELTA ENGINEERING GROUP

USER NAME = footemj	DESIGNED -	REVISED - R. TOMSONS 03-29-12
	DRAWN - CADD	REVISED -
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 4/19/2019	DATE - 12-18-02	REVISED -

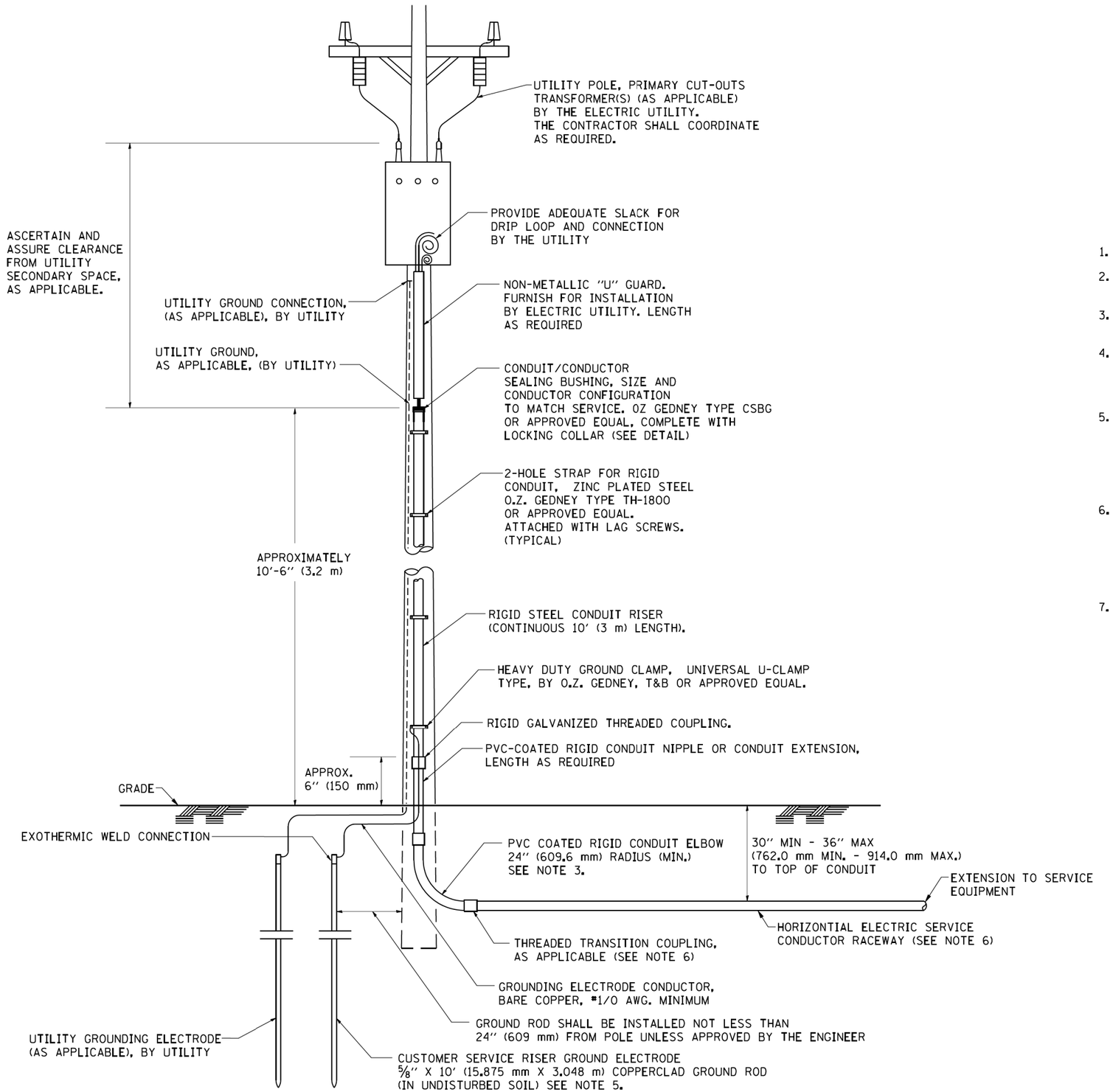
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER, BASE MOUNTED
480 VOLT, 200 AMP, (DUAL)

SCALE: NONE | SHEET E-16 OF E-22 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	251
	E–200 (BE–200)	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

be200.dgn 4/19/2019 2:02:43 PM | userfootemj

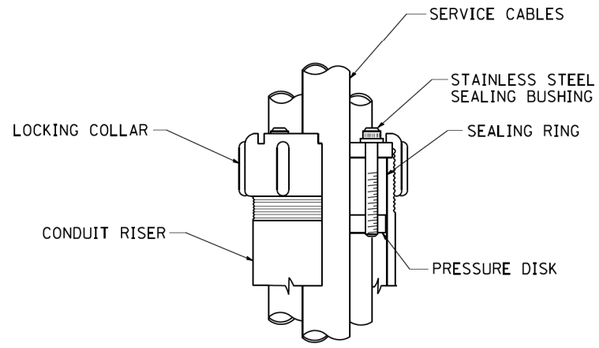


APPLICATION

THIS DETAIL APPLIES FOR LOW VOLTAGE ELECTRIC SERVICE (660 V OR LESS) FROM AN OVERHEAD UTILITY SUPPLY TO SEPERATLY-MOUNTED SERVICE EQUIPMENT.

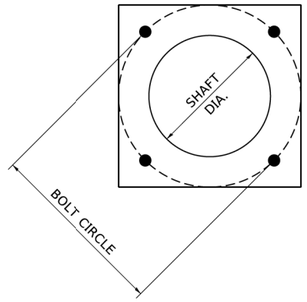
NOTES

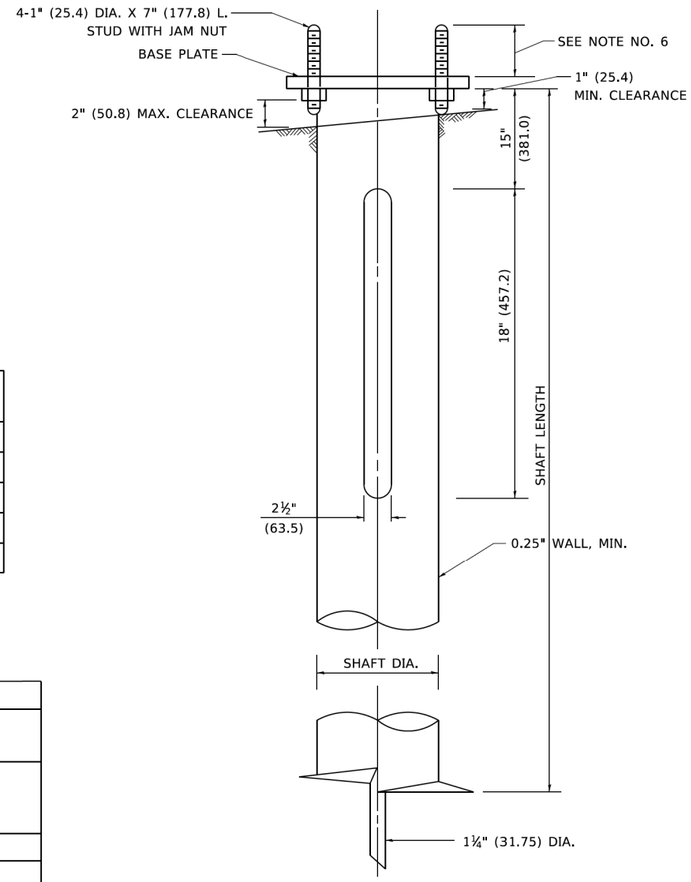
1. SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
2. UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.
3. CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED ON THE PLANS.
4. PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MFR RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE. ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
5. THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "U" GUARD INSTALLATION AND SERVICE CONNECTION.
6. THE HORIZONTAL ELECTRIC SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALIC TO NON METALIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
7. PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT, AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISIONS TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION IS REQUIRED AND SHALL BE INCLUDED IN THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.



SEALING BUSHING DETAIL

FILE NAME = W:\diststd\22x34\be220.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 03-03-06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ELECTRIC SERVICE INSTALLATION AERIAL, REMOTE DISCONNECT	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DELTA ENGINEERING GROUP		DRAWN -	REVISED -			3533	17-00083-00-PV	COOK	421	252
	PLOT SCALE = 50.0000 '/ IN.	CHECKED - MEA	REVISED -				BE-220	CONTRACT NO. 61H14		
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE SHEET E-17 OF E-22 SHEETS STA. TO STA.		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			





HELIX FOUNDATION SIZE

POLE MOUNTING HEIGHT	BOLT CIRCLE	SHAFT DIAMETER	SHAFT LENGTH	BASEPLATE
30 FT.	11½"	8⅝"	6 FT.	12"x12"x1"
31 FT.-35 FT.	11½"	8⅝"	6 FT.	12"x12"x1"
36 FT.-40FT.	15"	8⅝"	6 FT.	15"x15"x1¼"
41 FT.-45 FT.	15"	8⅝"	6 FT.	15"x15"x1¼"
46 FT.-50 FT.	15"	10"	8 FT.	15"x15"x1¼"

METAL HELIX FOUNDATION MATERIALS

ITEM	MATERIAL REQUIREMENT
BASEPLATE	AASHTO M 270M, GRADE 36 (M270M, GRADE 250)
SHAFT	ASTM A 252, GRADE 2 (PHOSPHOROUS 0.04% MAXIMUM, SULFUR 0.05% MAXIMUM)
HELIX SCREW	AASHTO M 183 (ASTM A 635)
PILOT POINT	AASHTO M 270 (ASTM A 575)
ANCHOR RODS/STUDS	AASHTO M 314 (ASTM F 1554)
HEXAGON NUTS	AASHTO M 291M (ASTM A 563) GRADE DH, OR AASHTO M 292 (ASTM A 194) GRADE 2H
WASHERS	AASHTO M 293 (ASTM F 436)

NOTES

1. ALL DIMENSION IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. ALL MATERIAL SHALL BE GALVINIZED ACCORDING TO AASHTO M111, UNLESS OTHERWISE SPECIFIED.
3. ALL WELDS SHALL BE CONTINUOUS AND NOT LESS THAN 1#4" (6.35 mm) FILLET WELDS. THE WELDED FOUNDATION SHALL BE CAPABLE OF WITHSTANDING 10,000 FT/LBS (13558.18 n.m) OF INSTALLATION TORQUE APPLIED ABOUT THE AXIS OF THE FOUNDATION.
4. THE HELIX FOUNDATION SHAFT SHALL BE INSTALLED VERTICAL AND THE BASE PLATE SHALL BE IN LEVEL. THE BREAKAWAY COUPLINGS AND HARDWARE SHALL NOT BE USED TO ALIGN THE POLE INSTALLATION.
5. THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE INSTALLATION OF THE LIGHT POLE.
6. THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF THE BASE PLATE WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS.
7. ANY VOIDS WITHIN THE METAL FOUNDATION SHALL BE FILLED WITH FINE AGGREGATE.
8. METAL FOUNDATIONS SHALL BE INSTALLED IN UNDISTURBED SOIL. PREDRILLING A PILOT HOLE AND/OR BACKFILLING AROUND THE FOUNDTION IS NOT ALLOWED.
9. THE METAL FOUNDATION SHALL NOT BE INSTALLED TO A TORQUE WHICH EXCEEDS THE MANUFACTURER'S MAXIMUM TORQUE RATING NOR SHALL IT BE INSTALLED TO AN INSTALLATION TORQUE VALUE OF LESS THAN 3,500 FT LB (4,750 KNM). METAL FOUNDATIONS THAT ARE NOT INSTALLED TO FULL INSTALLATION DEPTH OR DO NOT ACHIEVE THE MINIMUM INSTALLATION TORQUE SHALL BE REMOVED AND REPLACED WITH A CONCRETE FOUNDATION AT NO ADDITIONAL COST.
10. THE BASEPLATE SHALL BE PERPENDICULAR TO THE SHAFT AXIS (± 1°) AND THE HOLE CENTERLINE SHALL BE CONCENTRIC (± 0.188) TO THE SHAFT AXIS.
11. THE PILOT POINT AND SHAFT AXIS SHALL BE CONCENTRIC (± 0.125) AND IN LINE (± 2°).
12. THE BASEPLATE SHALL BE STAMPED WITH THE MANUFACTURERS NAME AND DATE OF MANUFACTURE.

DELTA ENGINEERING GROUP

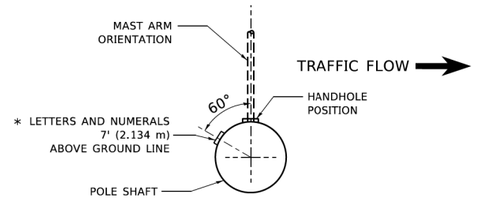
USER NAME = footemj	DESIGNED -	REVISED -	
	DRAWN - DLB	REVISED -	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 4/19/2019	DATE - 02-27-07	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

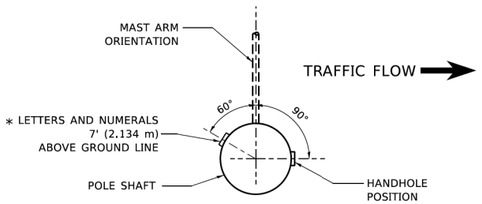
LIGHT POLE FOUNDATION, METAL

SCALE: NONE | SHEET E-18 OF E-22 SHEETS | STA. | TO STA.

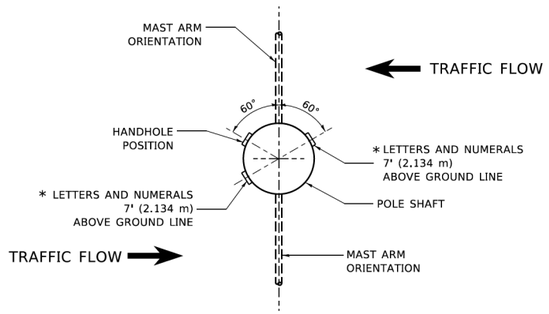
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	253
	BE-305	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			



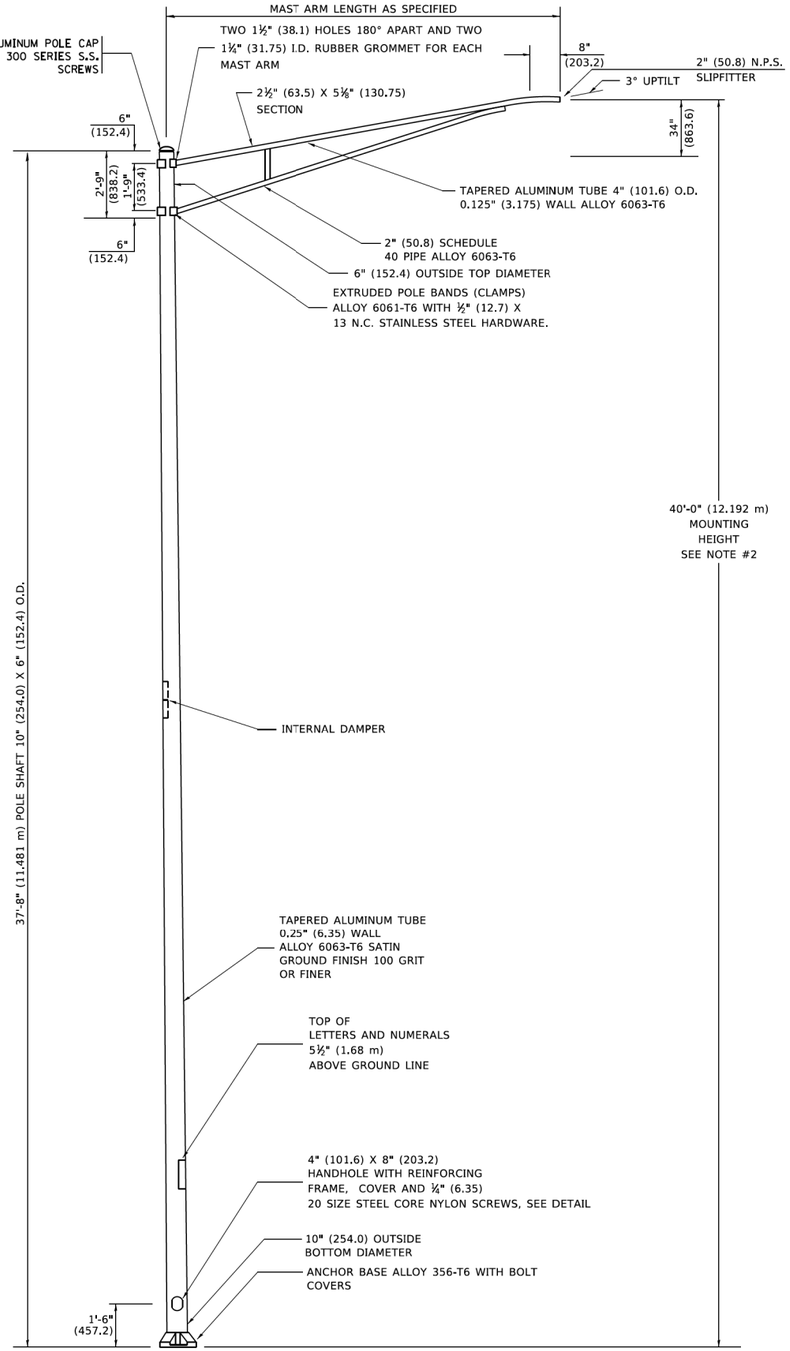
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL

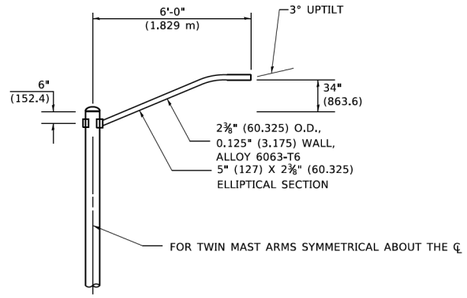


POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES



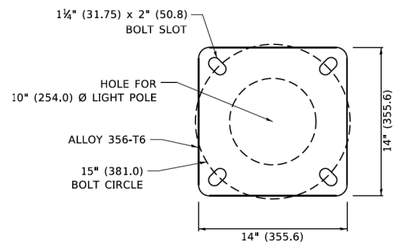
POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES





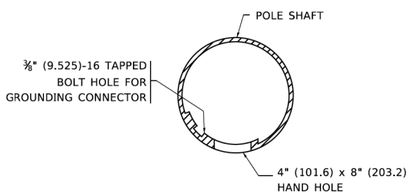
6' (1.8 m) SINGLE MEMBER MAST ARM

(N.T.S.)



LIGHT POLE BASE PLATE DETAIL

15 INCH (381.0) BOLT CIRCLE



HANDHOLE DETAIL

(N.T.S.)

NOTES

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
3. THE LIGHT POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.
4. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR. BURNDY K2C23, T&B SP4DL OR APPROVED EQUAL.
5. LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.
6. LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.
7. LIGHTING UNIT IDENTIFICATION NUMBERS SHALL BE INSTALLED BEFORE THE LIGHTING UNIT IS ENERGIZED.

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DELTA ENGINEERING GROUP

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	DRAWN -	REVISED -	R. TOMSONS 09-02-03
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -	R. TOMSONS 01-18-13
PLOT DATE = 4/19/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALUMINUM LIGHT POLE
40'–0" (12.192 m) MOUNTING HEIGHT

SCALE: NONE | SHEET E-19 OF E-22 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	254
	BE–401	CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		

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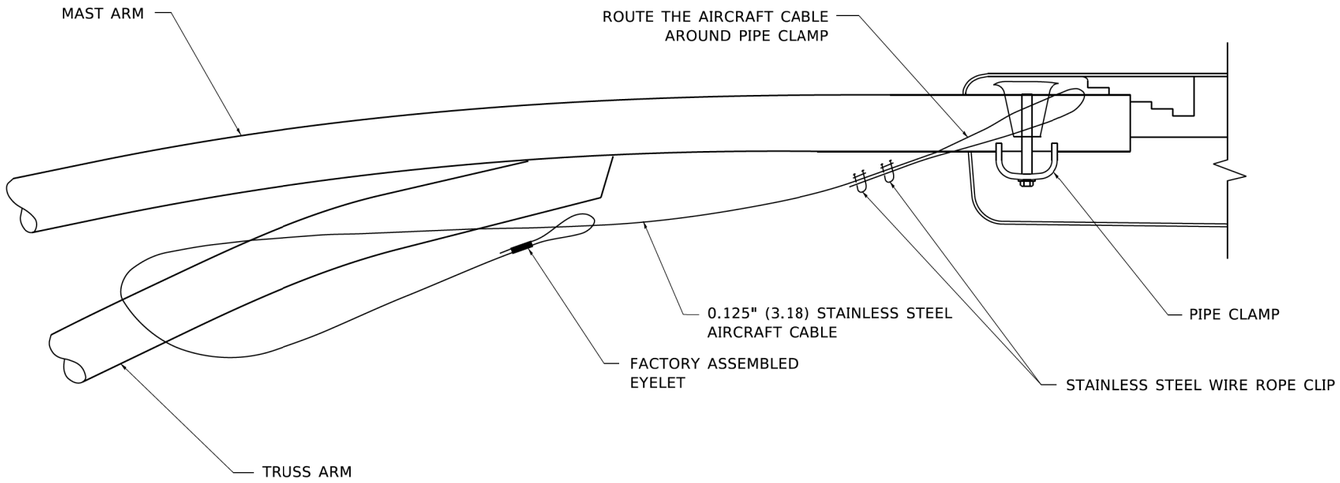
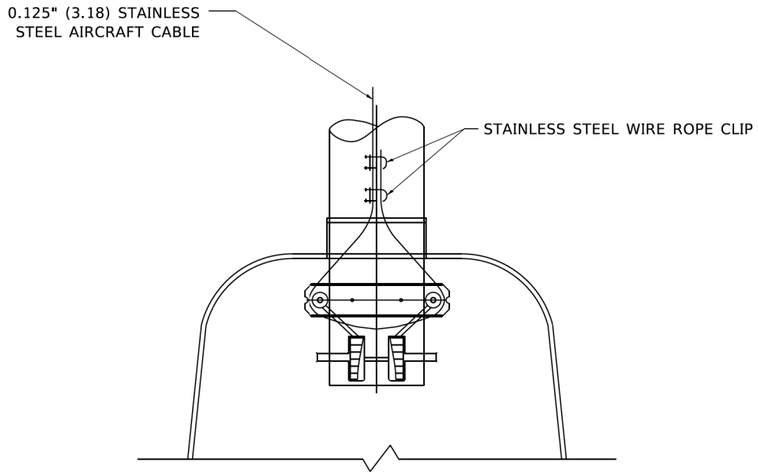
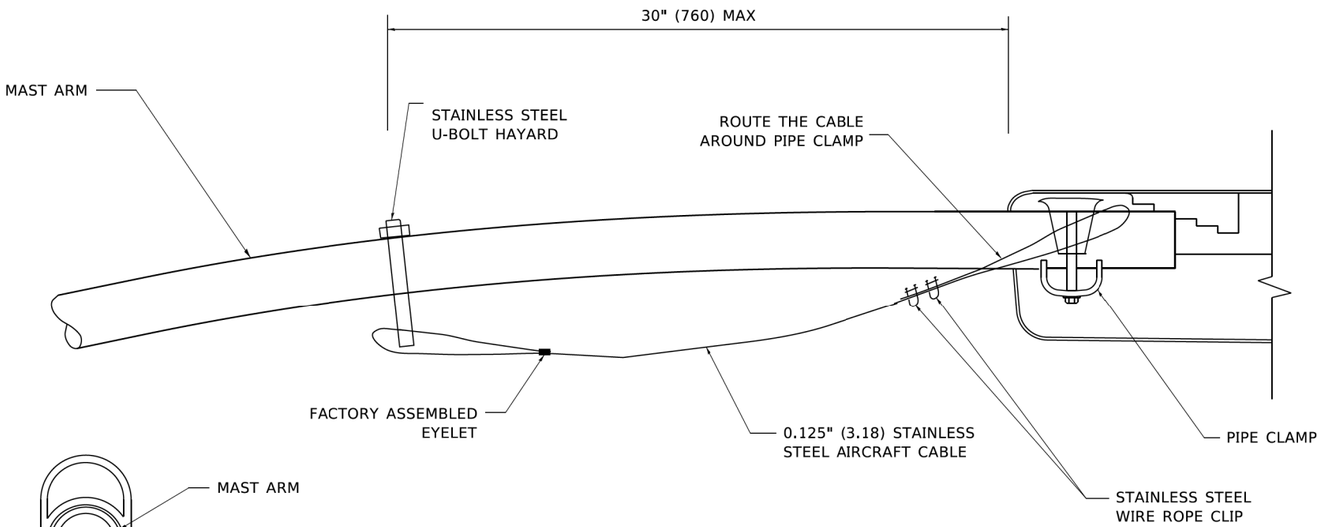


SIDE VIEW (TRUSS ARM)
N.T.S.



BOTTOM VIEW
N.T.S.



SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)
N.T.S.

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
3. THE 0.125" (3.18) STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL.
4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN.

DELTA ENGINEERING GROUP

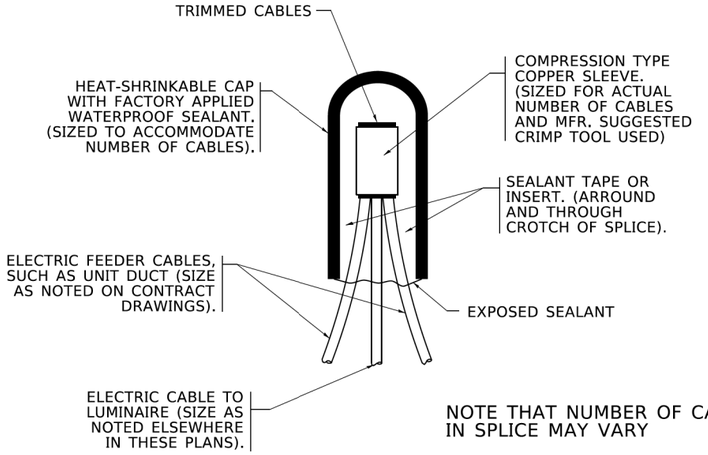
USER NAME = footemj	DESIGNED -	REVISED - 08-08-03
	DRAWN -	REVISED -
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 4/19/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LUMINAIRE SAFETY CABLE ASSEMBLY

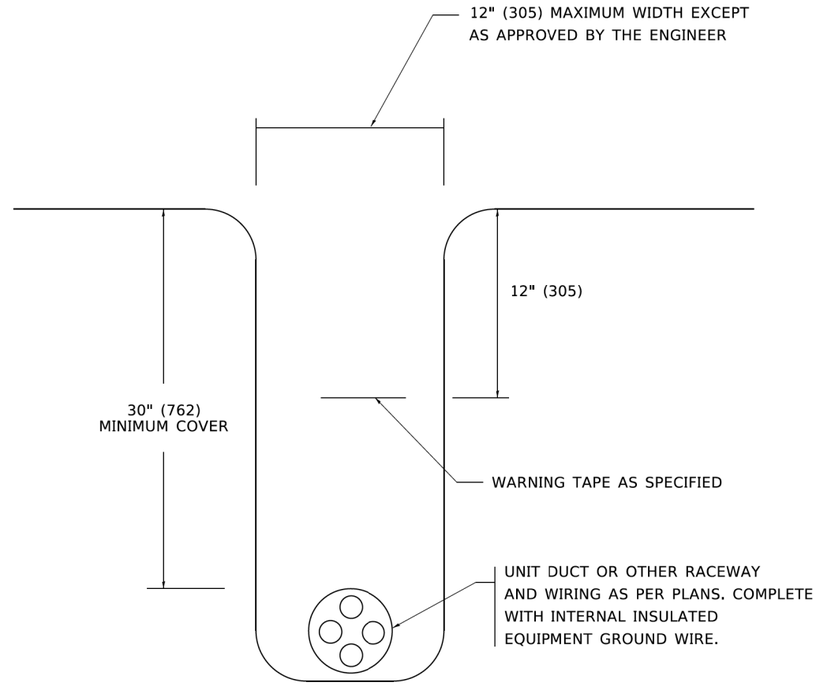
SCALE: NONE | SHEET E-20 OF E-22 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	255
	BE-701	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			



NOTE THAT NUMBER OF CABLES IN SPLICE MAY VARY

TYPICAL SPLICE DETAIL
N.T.S.



TYPICAL WIRING IN TRENCH DETAIL
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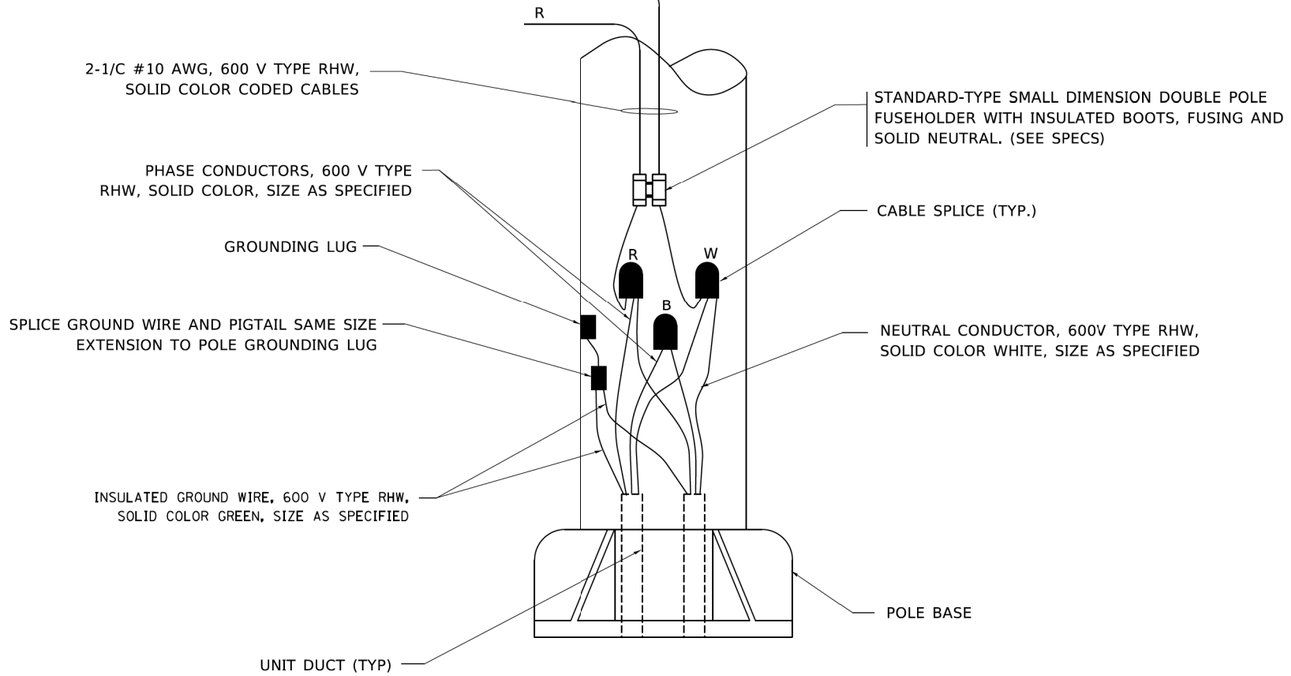

POLE WIRING DETAIL
N.T.S.

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DELTA ENGINEERING GROUP

USER NAME = footemj	DESIGNED -	REVISED - 08-08-03	
	DRAWN -	REVISED -	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 4/19/2019	DATE -	REVISED -	

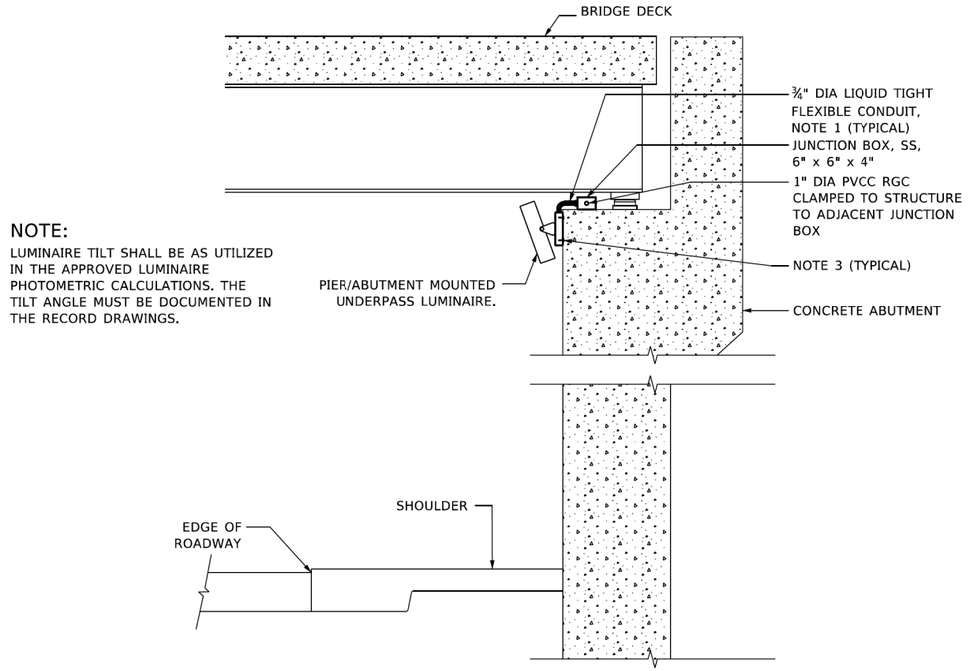
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISC. ELECTRICAL DETAILS
SHEET A

SCALE: NONE | SHEET E-21 OF E-22 SHEETS | STA. | TO STA.

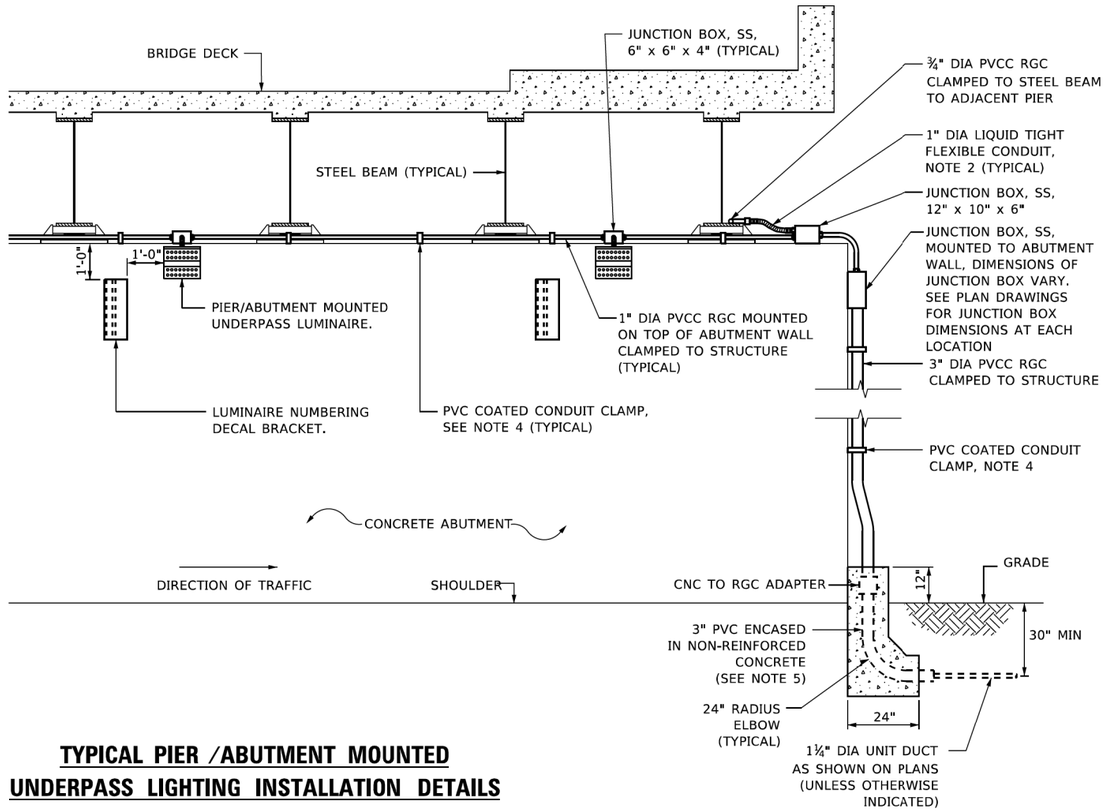
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	256
	BE-702	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

pw702.dgn 4/19/2019 3:22:19 PM User:footemj

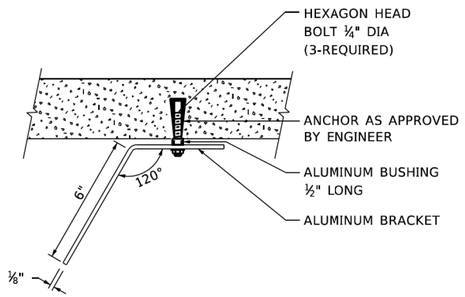


NOTE:

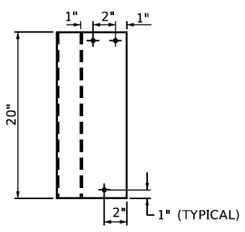
LUMINAIRE TILT SHALL BE AS UTILIZED IN THE APPROVED LUMINAIRE PHOTOMETRIC CALCULATIONS. THE TILT ANGLE MUST BE DOCUMENTED IN THE RECORD DRAWINGS.



TYPICAL PIER /ABUTMENT MOUNTED UNDERPASS LIGHTING INSTALLATION DETAILS



TOP VIEW



ELEVATION

LUMINAIRE NUMBERING DECAL BRACKET

NOT TO SCALE

PVC COATED CONDUIT BEAM CLAMP

NOT TO SCALE

PVC COATED CONDUIT CLAMP

NOT TO SCALE

NOTES:

1. LIQUID TIGHT FLEXIBLE METAL CONDUIT, MAXIMUM LENGTH 6'-0", TYPICAL FOR EACH INSTANCE AS SHOWN. PROVIDE PVC COATED RIGID GALVANIZED STEEL CONDUIT AS REQUIRED NOT TO EXCEED 6'-0" OF FLEXIBLE LIQUID TIGHT METAL CONDUIT. LIQUID TIGHT FLEXIBLE METAL CONDUIT WILL BE INCLUDED IN THE COST OF THE CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED PAY ITEM EXCEPT THAT THE COST OF THE " DIA. RIGID STEEL CONDUIT AND " DIA. FLEXIBLE CONDUIT SHALL BE INCLUDED IN THE LUMINAIRE INSTALLATION.
2. SEE UNDERPASS LIGHTING PLANS FOR INSTALLATION LOCATION OF UNDERPASS LIGHTING LUMINAIRES.
3. UNDERPASS LUMINAIRE MOUNTED TO FACE OF PIER OR ABUTMENT WALL WITH ½" ALUMINUM SPACERS. MOUNTING HEIGHT OF 1" BELOW THE TOP OF PIER OR ABUTMENT WALL TYPICAL FOR ALL PIER/ABUTMENT MOUNTED UNDERPASS LUMINAIRES UNLESS OTHERWISE NOTED.
4. EXPANSION ANCHOR, POWDER ACTUATED FASTENERS WILL NOT BE ALLOWED. EXPANSION ANCHOR MUST BE SIZED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.
5. SECURE THE CONDUIT WITH PVC COATED CONDUIT CLAMPS OR CONDUIT BEAM CLAMPS AS SHOWN AT 5'-0" INTERVALS FOR LATERALS AND WITHIN 2'-0" MAXIMUM FROM ANY JUNCTION BOX, FLEXIBLE CONDUIT, OR CHANGE IN DIRECTION. ALL PVC COATED CONDUIT CLAMPS OR BEAM CLAMPS SHALL BE INCLUDED WITH THE COST OF THE "CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED" PAY ITEM.
6. THE CONCRETE ENCASED CONDUIT TRANSITION SHALL BE INCLUDED IN THE COST OF THE GALVANIZED RIGID STEEL CONDUIT PAY ITEMS.
7. ALL CONDUIT ATTACHED TO STRUCTURE SHALL BE PVC COATED RIGID STEEL CONDUIT (PVCC RGC) TYPICAL.

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DELTA ENGINEERING GROUP

USER NAME = gaglianobt	DESIGNED -	REVISED - 01-25-05	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/15/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER /ABUTMENT MOUNTED LED UNDERPASS LUMINARE INSTALLATION DETAILS

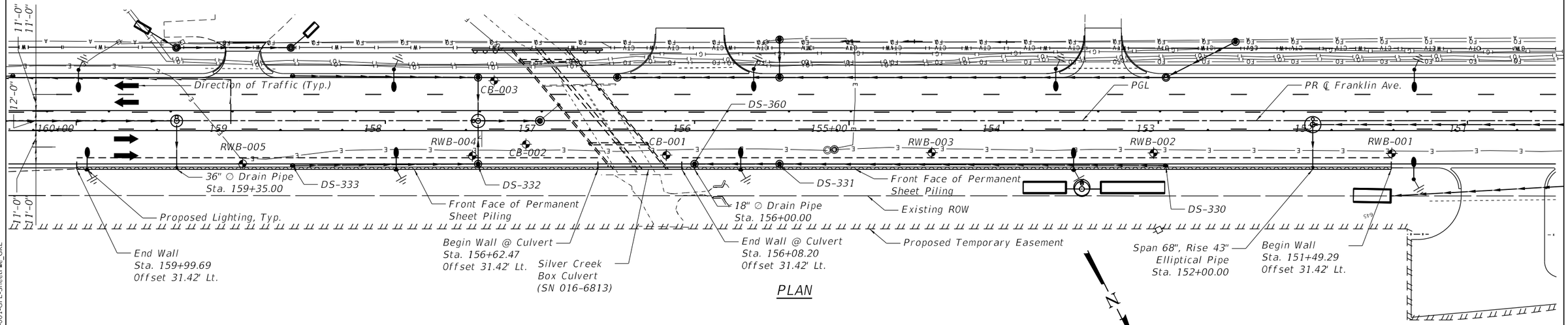
SCALE: NONE | SHEET E-22 OF E-22 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	257
	BE-903	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

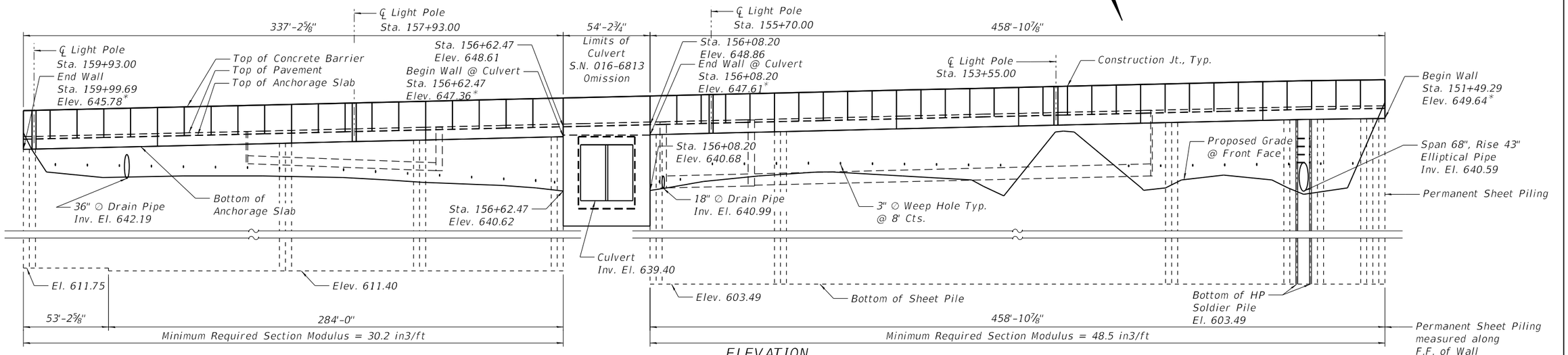
Bench Mark: Cross Cut on top of SSE bonnet bolt of first fire hydrant west of Silver Creek and west of entrance to #10801 Franklin Ave. (third hydrant west of I-294 overpass) on SW side of Franklin Ave. Sta. 155+20, 41' RT., Elev. 649.02.

Existing Structure: None

Traffic to be maintained using staged construction.



PLAN



ELEVATION

Looking South

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

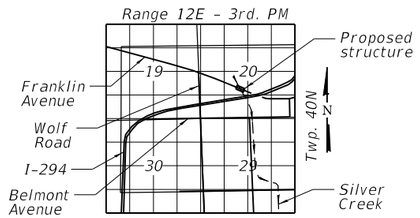
DESIGN STRESSES

FIELD UNITS

f'c = 4,000 psi (Superstructure)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50, Sheet Pile)

LEGEND

- CTV — Exist. Underground Cable TV
- E — Exist. Underground Electric
- FO — Exist. Underground Fiber Optic
- G — Exist. Underground Gasline
- W — Exist. Underground Water Utility
- A — Exist. Aerial Lines
- Exist. ROW
- Prop. Temporary Easement
- Prop. Drainage
- Prop. Drainage Structure
- Soil Boring
- Prop. Light Pole



LOCATION SKETCH

NOTES

1. Stations & Offsets are given to the front face of the Permanent Sheet Piling & are measured from the PR. ℄ Franklin Ave.
2. (*) Elevations are at Bottom of Anchorage Slab at F.F. of Sheet Pile Wall.

GENERAL PLAN AND ELEVATION
PERMANENT SHEET PILING
ALONG FRANKLIN AVENUE
F.A.U. RTE. 3533 (FRANKLIN AVE.)
SECTION 17-00083-00-PV
COOK COUNTY
STATION 151+49.29 TO 159+99.69
STRUCTURE NO. 016-XXXX

GARZA KARHOFF ENGINEERING, LLC

USER NAME =	DESIGNED - RJO	REVISED -	
	CHECKED - ZC	REVISED -	
PLOT SCALE =	DRAWN - RJO	REVISED -	
PLOT DATE =	CHECKED - RJO	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
PERMANENT SHEET PILING ALONG FRANKLIN AVENUE
SHEET S-1 OF S-14 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	258
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

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GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.

2. It shall be the Contractor's responsibility to verify the location of the existing underground utilities prior to starting construction. Existing utilities in conflict with Permanent Sheet pile wall construction shall be abandoned or relocated according to directions given on the roadway plans.

3. Backfill shall be placed prior to pouring of Anchorage Slab.

4. E.F. denotes Each Face.
   F.F. denotes Front Face.
   B.F. denotes Back Face.
   I.F. denotes Inside Face.
   O.F. denotes Outside Face.
   U.N.O. denotes Unless Noted Otherwise.
   R.O.W. denotes Right Of Way.
   O.D. denotes Outside Diameter.

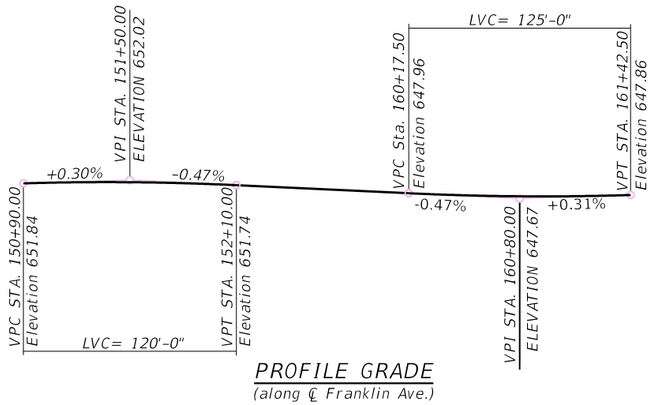
5. Protective coat shall be applied to top and inside surfaces of the barrier, and top surface of the anchorage slab.

6. All exposed concrete edges shall be chamfered $\frac{3}{4}$" except as noted.

TOTAL BILL OF MATERIAL

Item	Unit	Total
Porous Granular Backfill	Cu. Yd.	631
Protective Coat	Sq. Yd.	1358
Structure Excavation	Cu. Yd.	513
Concrete Structures	Cu. Yd.	7.3
Concrete Superstructure	Cu. Yd.	397.1
Stud Shear Connectors	Each	76
Reinforcement Bars, Epoxy Coated	Pound	65,050
Permanent Sheet Piling	Sq. Ft.	32,581
Furnishing Soldier Piles, HP14x117	Foot	92
Driving Soldier Piles, HP14x117	Foot	92
Precast Concrete Lagging	Sq. Ft.	30

INDEX OF SHEETS



PROFILE GRADE
(along ℄ Franklin Ave.)

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GARZA KARHOFF ENGINEERING, LLC

USER NAME =	DESIGNED - RJO	REVISED -	
	CHECKED - ZC	REVISED -	
PLOT SCALE =	DRAWN - RJO	REVISED -	
PLOT DATE =	CHECKED - ZC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS & BILL OF MATERIAL

SHEET S-2 OF S-14 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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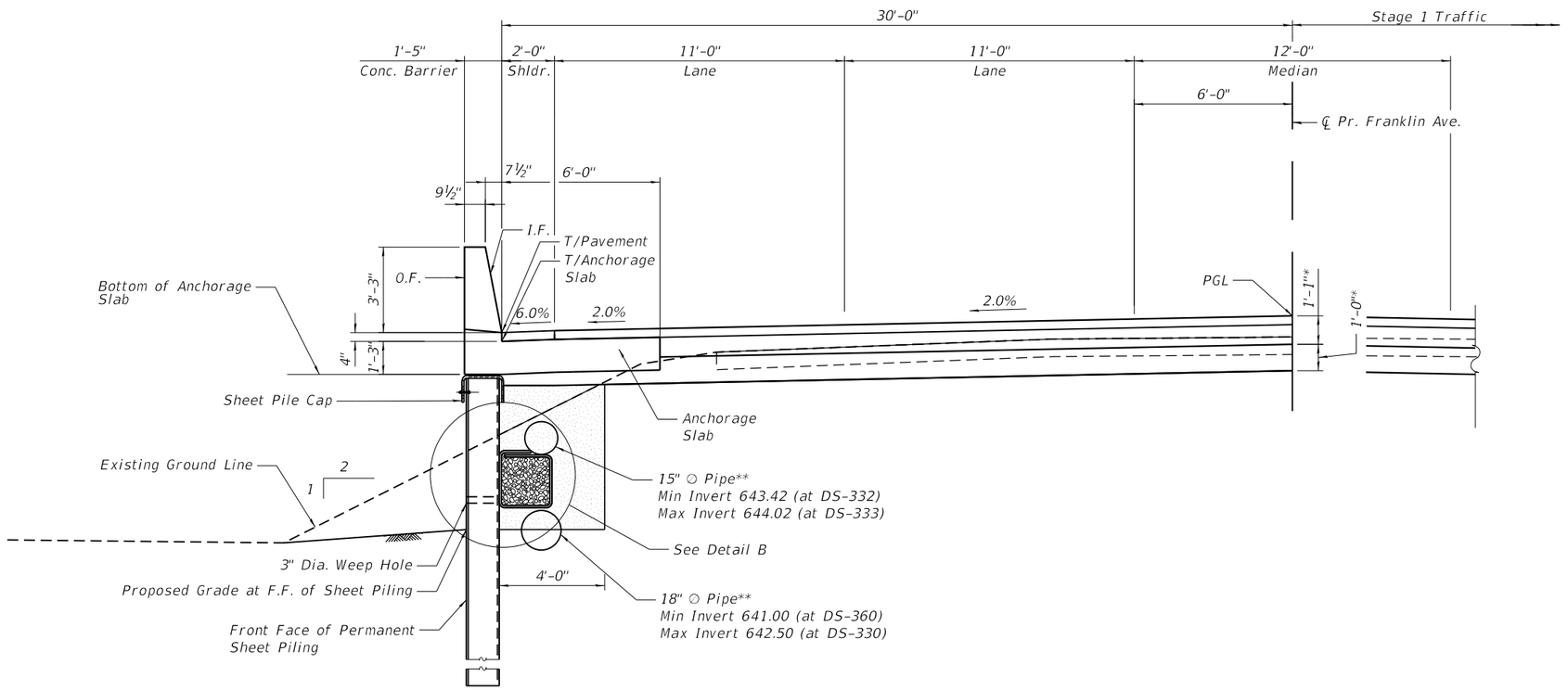
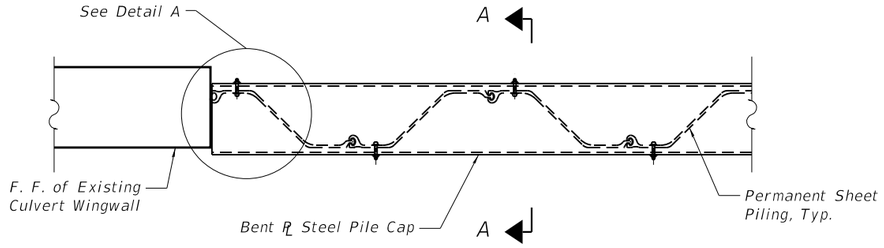
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	



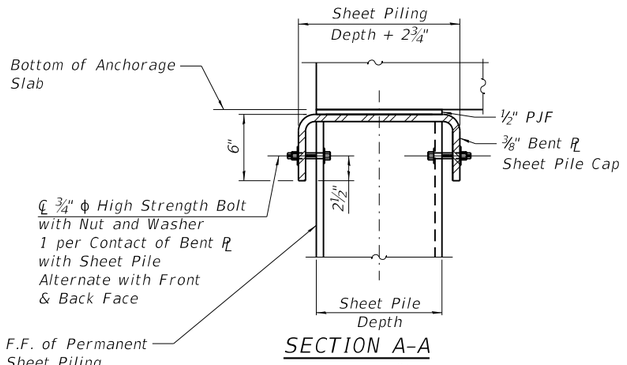
TYPICAL SECTION

*For information only.
See Roadway Plans.

**For information only.
See Drainage Plans.

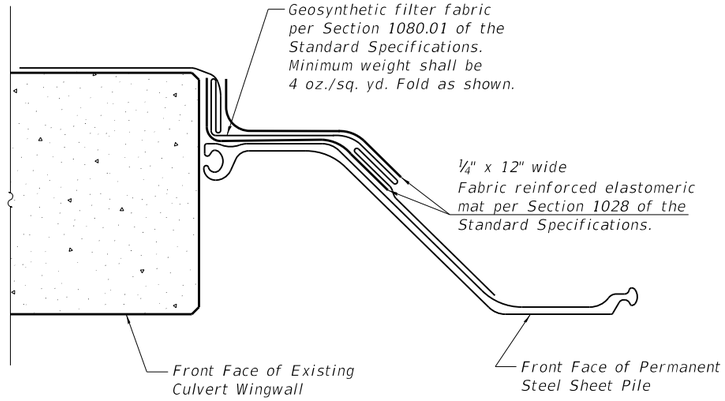


TOP PARTIAL PLAN OF PILE CAP



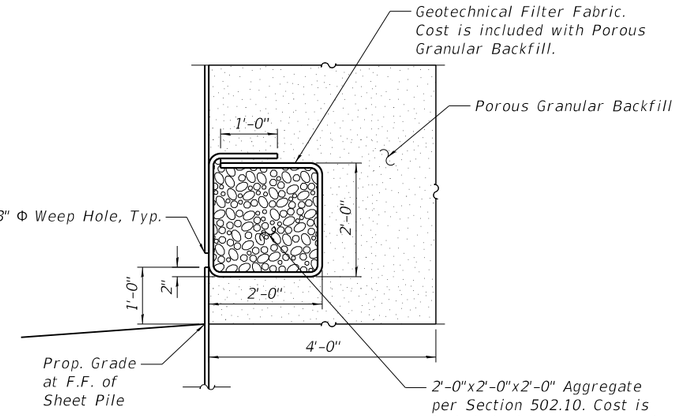
SECTION A-A

Cost of Sheet Pile Cap, ¾" ϕ High Strength Bolts and PJF is included with Permanent Sheet Piling.



DETAIL A

At Sta. 156+08.20 (Shown) &
At Sta. 156+62.47 (Opposite Hand)



DETAIL B

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GARZA KARHOFF ENGINEERING, LLC	USER NAME =	DESIGNED - RJO	REVISED -
		CHECKED - ZC	REVISED -
	PLOT SCALE =	DRAWN - AJL	REVISED -
	PLOT DATE =	CHECKED - RJO	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS & DETAILS 1

SHEET S-3 OF S-14 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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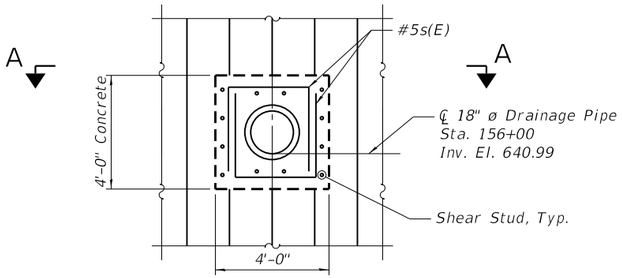
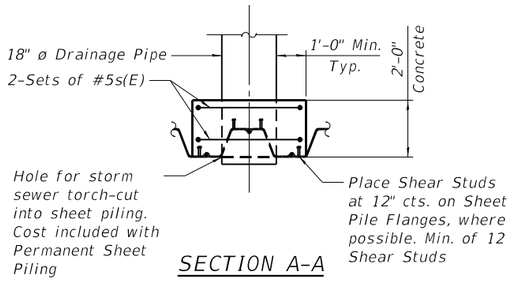
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

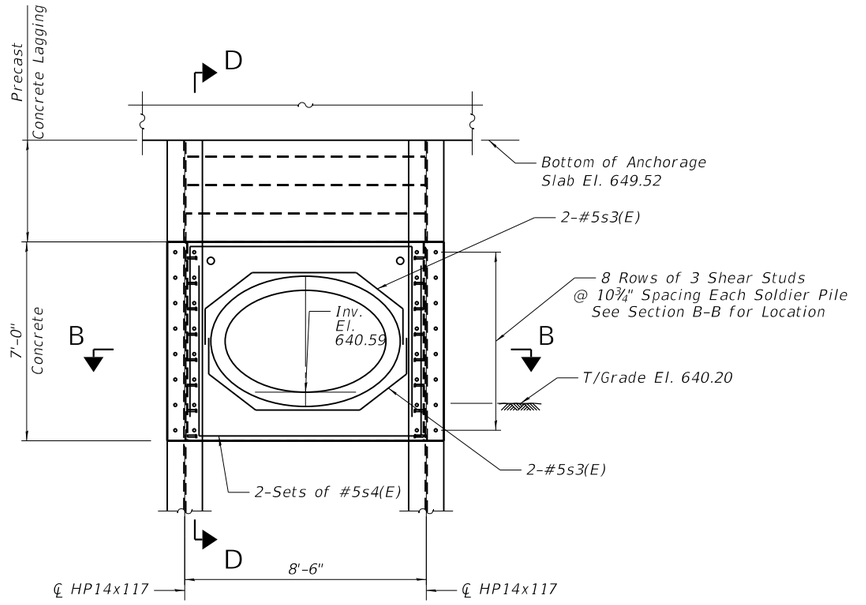


CONCRETE COLLAR AT DS-360

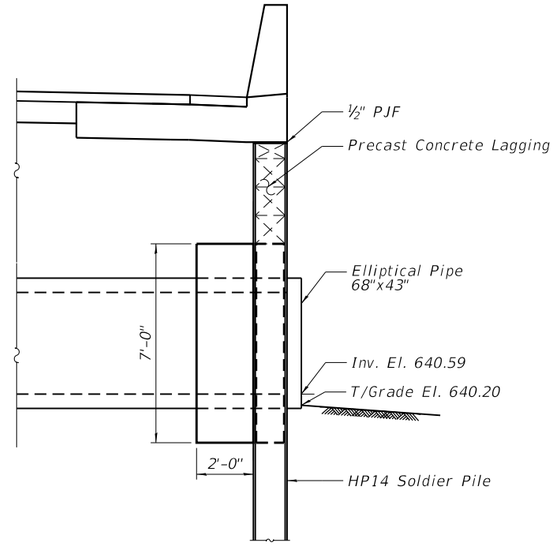
(18" ø Storm Pipe)



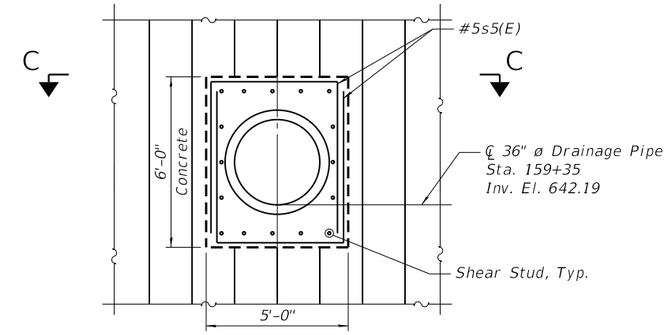
SECTION A-A



CONCRETE COLLAR AT DS-556 ELLIPTICAL PIPE

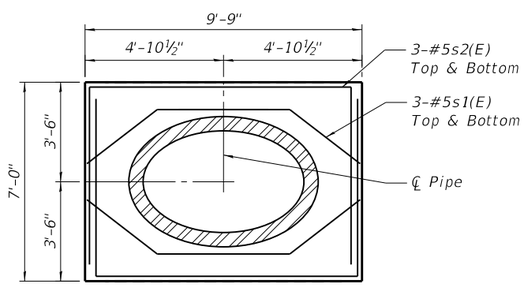


SECTION D-D



CONCRETE COLLAR AT DS-518

(36" ø Storm Pipe)

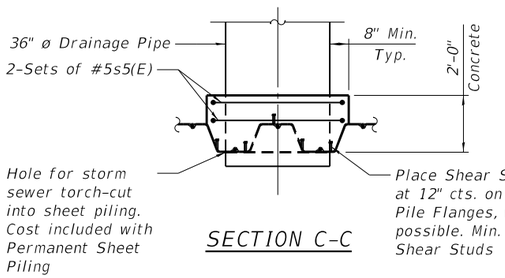


SECTION E-E

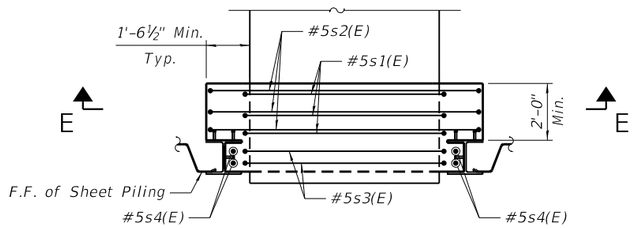
(68"x43" Elliptical Pipe)

BILL OF MATERIAL

Item	Unit	Total
Concrete Structures	Cu. Yd.	7.3
Precast Concrete Lagging	Sq. Ft.	30



SECTION C-C



SECTION B-B

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GARZA KARHOFF ENGINEERING, LLC

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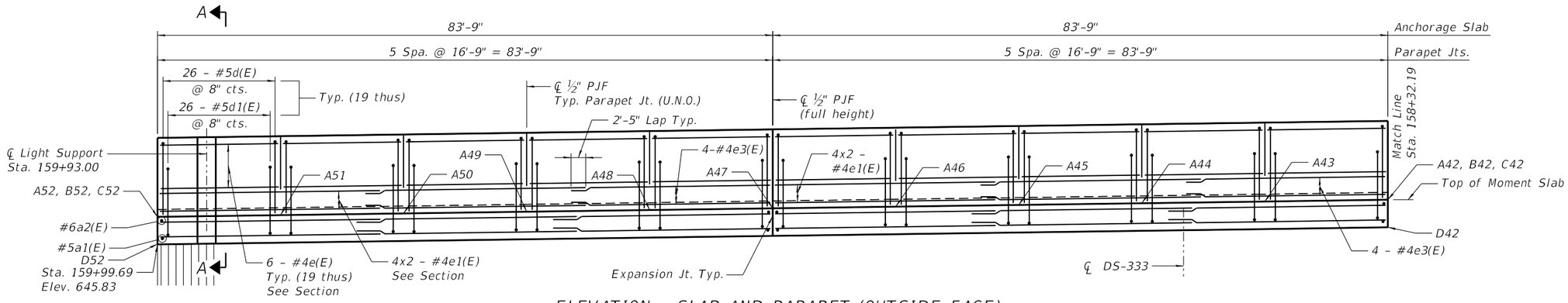
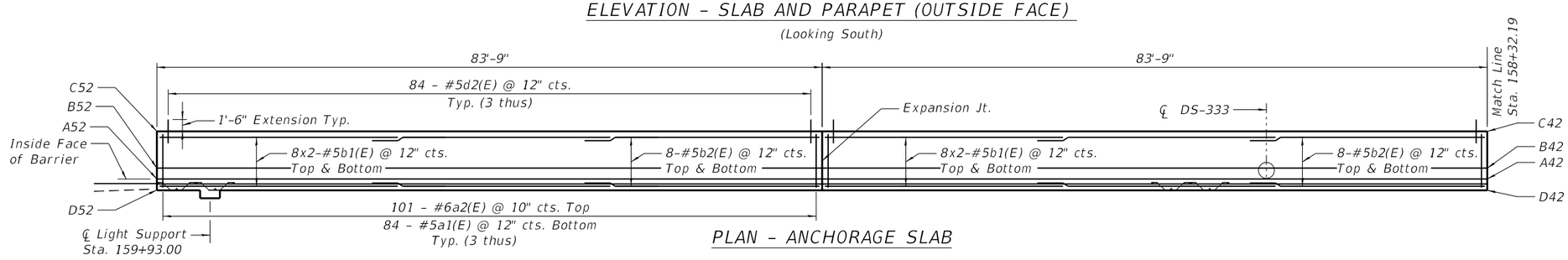
PLOT SCALE =	DRAWN - JJM	REVISED -		
PLOT DATE =	CHECKED - RJO	REVISED -		SHEET S-4 OF S-14 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	261
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

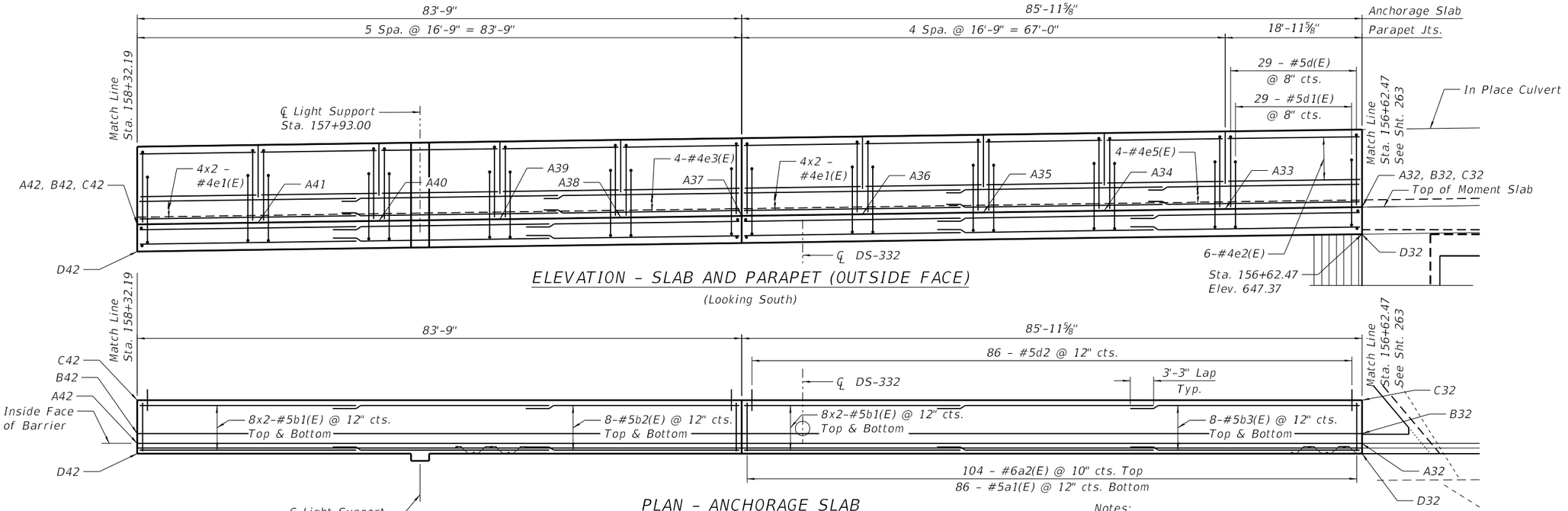


ELEVATION - SLAB AND PARAPET (OUTSIDE FACE)

(Looking South)



PLAN - ANCHORAGE SLAB



ELEVATION - SLAB AND PARAPET (OUTSIDE FACE)

(Looking South)

PLAN - ANCHORAGE SLAB

Notes:

1. Stations & offsets are given to the inside face of parapet and are measured from Pr. ℄ Franklin Ave.
2. Dimensions are measured along the inside face of parapet.
3. Bars indicated thus 7X3-#5 etc. indicates 7 lines of bars with 3 lengths per line.
4. Reinforcement shall be spaced as shown in Typical Section A-A thru Anchorage Slab on Sht. 265.
5. For Slab & Parapet Joint details and Section B-B, see Sht. 265.
6. For Bar list and Bill of Material, see Sht. 259.
7. For Drainage Structure opening in slab see Sht. 266 for additional reinforcement detail.

GARZA KARHOFF ENGINEERING, LLC

USER NAME =	DESIGNED - RJO	REVISED -	
	CHECKED - ZC	REVISED -	
PLOT SCALE =	DRAWN - RJO	REVISED -	
PLOT DATE =	CHECKED - RJO	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB
PLAN AND ELEVATION 1

SHEET S-5 OF S-14 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	262
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		

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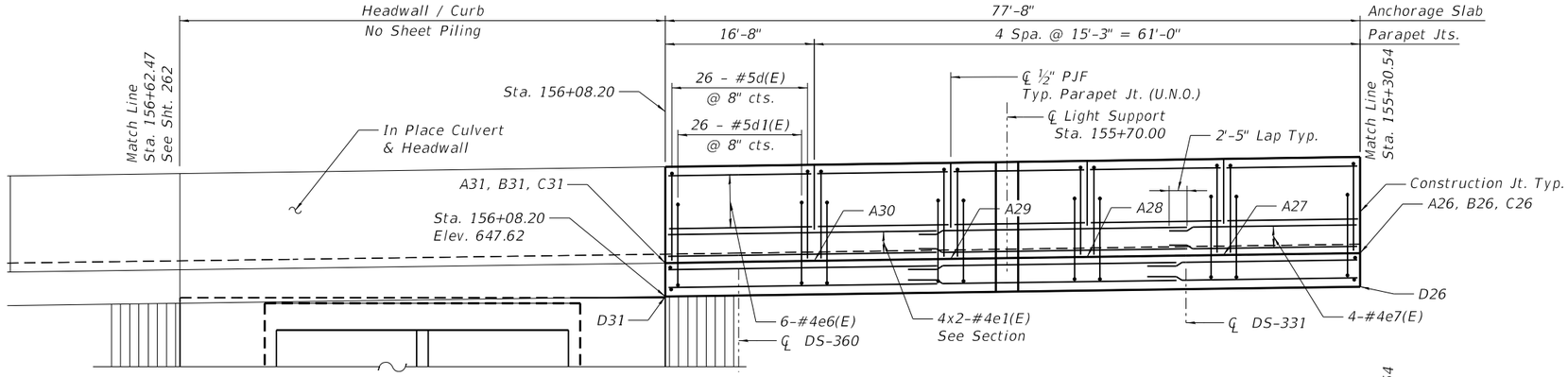
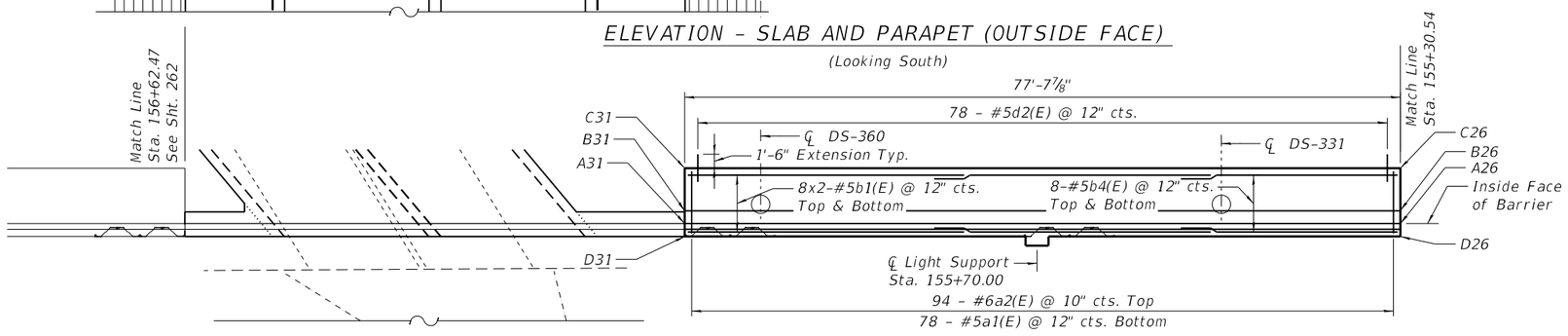
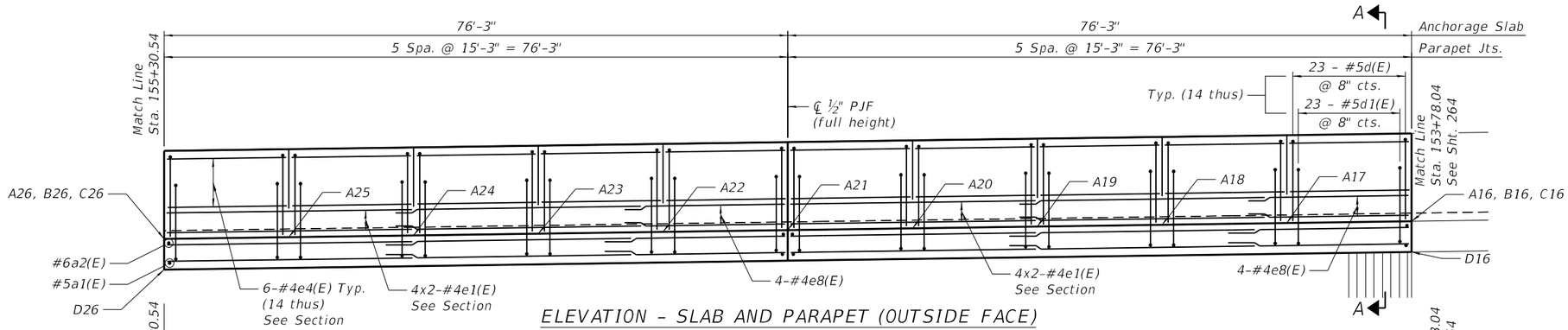


ELEVATION - SLAB AND PARAPET (OUTSIDE FACE)

(Looking South)

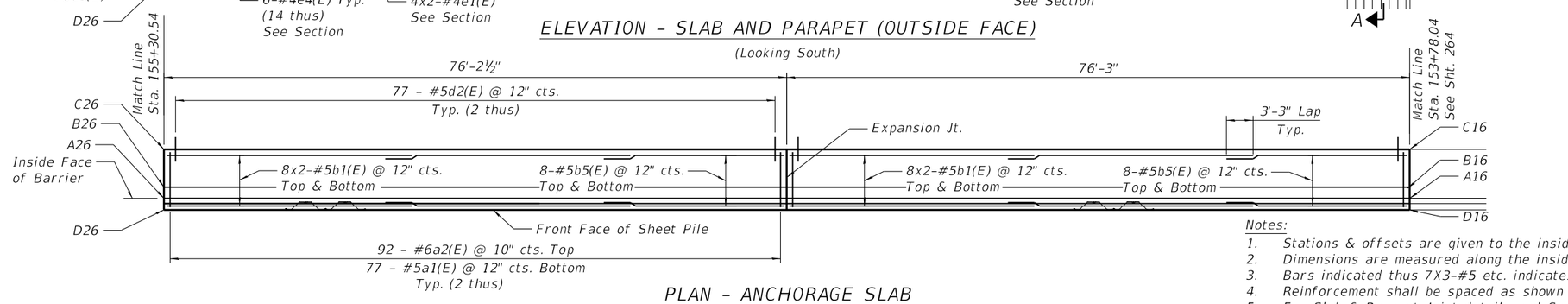


PLAN - ANCHORAGE SLAB



ELEVATION - SLAB AND PARAPET (OUTSIDE FACE)

(Looking South)



PLAN - ANCHORAGE SLAB

Notes:

1. Stations & offsets are given to the inside face of parapet and are measured from Pr. ℄ Franklin Ave.
2. Dimensions are measured along the inside face of parapet.
3. Bars indicated thus 7X3-#5 etc. indicates 7 lines of bars with 3 lengths per line.
4. Reinforcement shall be spaced as shown in Typical Section A-A thru Anchorage Slab on Sht. 265.
5. For Slab & Parapet Joint details and Section B-B, see Sht. 265.
6. For Bar list and Bill of Material, see Sht. 259.
7. For Drainage Structure opening in slab see Sht. 266 for additional reinforcement detail.

GARZA KARHOFF ENGINEERING, LLC

USER NAME =		DESIGNED - RJO	REVISED -	
		CHECKED - ZC	REVISED -	
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PLOT DATE =		CHECKED - RJO	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB
PLAN AND ELEVATION 2

SHEET S-6 OF S-14 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	263
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		

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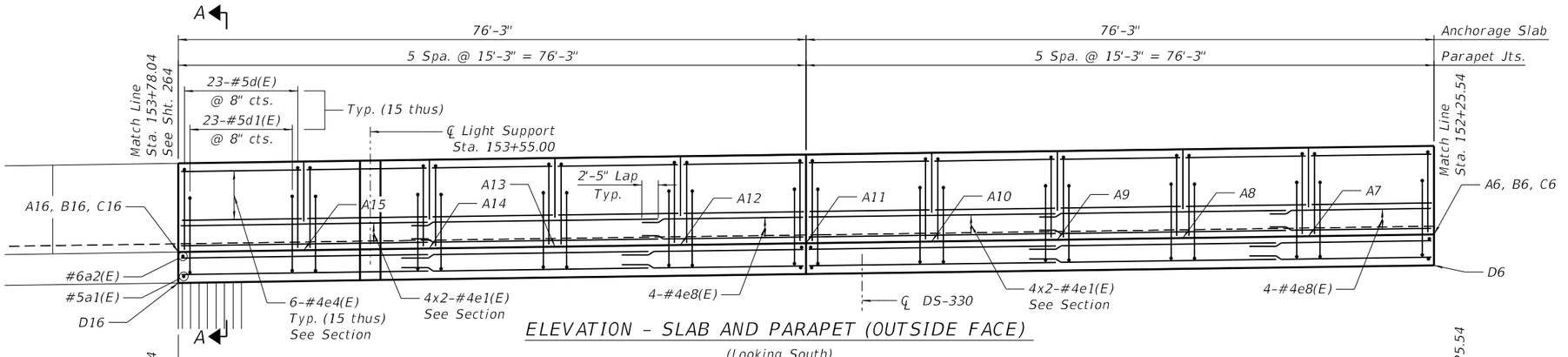
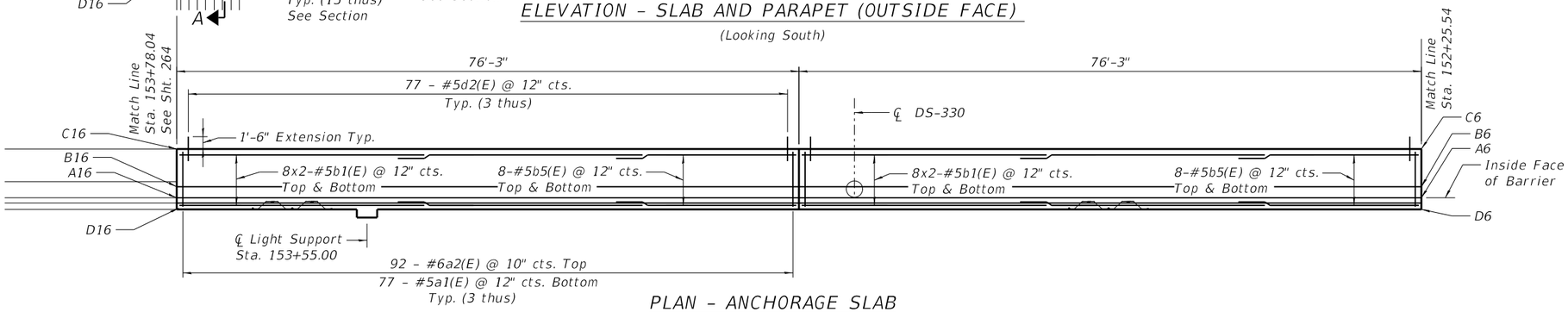
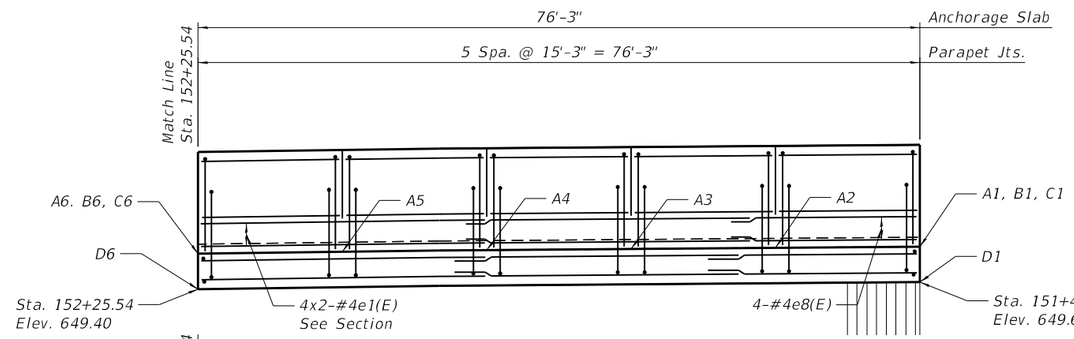


ELEVATION – SLAB AND PARAPET (OUTSIDE FACE)

(Looking South)

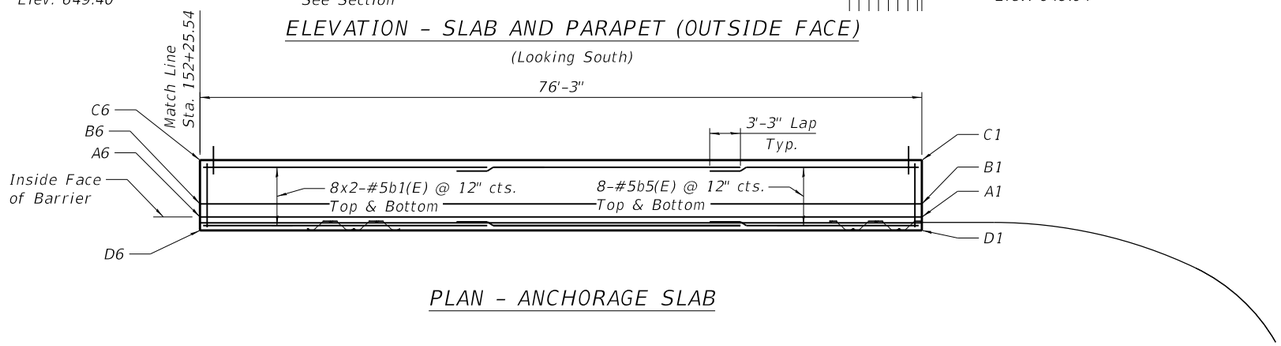


PLAN – ANCHORAGE SLAB



ELEVATION – SLAB AND PARAPET (OUTSIDE FACE)

(Looking South)



PLAN – ANCHORAGE SLAB

Notes:

1. Stations & offsets are given to the inside face of parapet and are measured from Pr. ℄ Franklin Ave.
2. Dimensions are measured along the inside face of parapet.
3. Bars indicated thus 7X3-#5 etc. indicates 7 lines of bars with 3 lengths per line.
4. Reinforcement shall be spaced as shown in Typical Section A-A thru Anchorage Slab on Sht. 265.
5. For Slab & Parapet Joint details and Section B-B, see Sht. 265.
6. For Bar list and Bill of Material, see Sht. 259.
7. For Drainage Structure opening in slab see Sht. 266 for additional reinforcement detail.

MODEL: Default
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GARZA KARHOFF ENGINEERING, LLC

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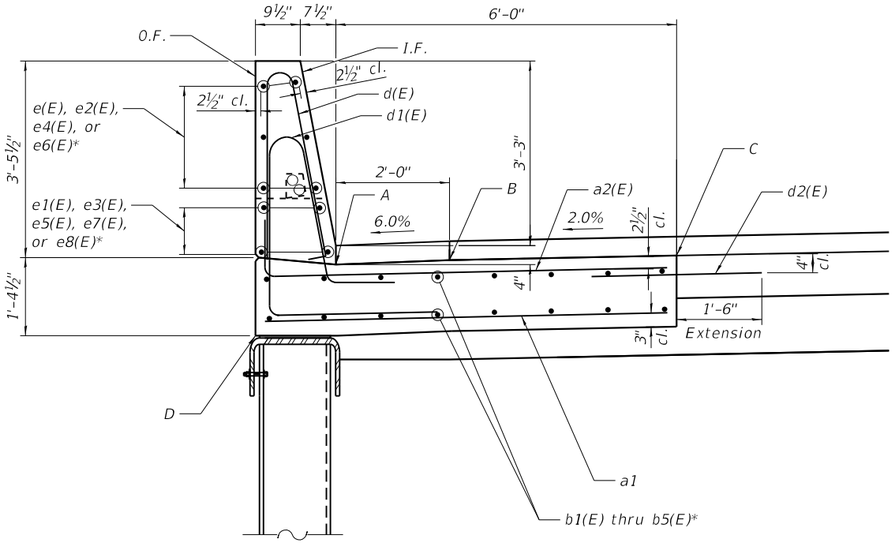
	CHECKED - ZC	REVISED -	
PLOT SCALE =	DRAWN - AJL	REVISED -	
PLOT DATE =	CHECKED - RJO	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB
PLAN AND ELEVATION 3

SHEET S-7 OF S-14 SHEETS

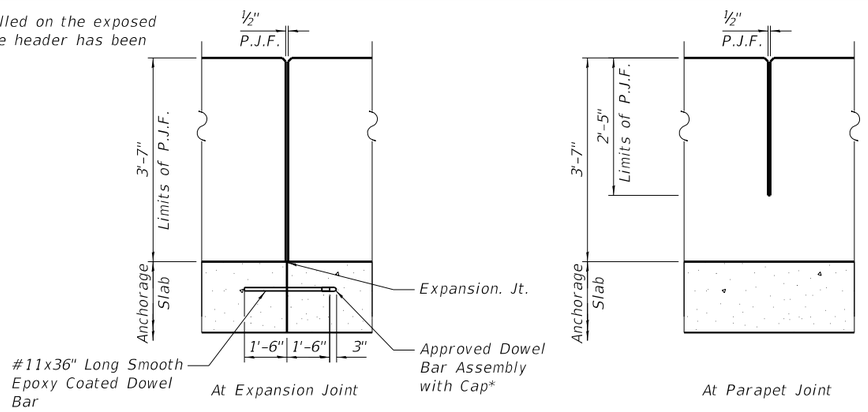
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	264
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	



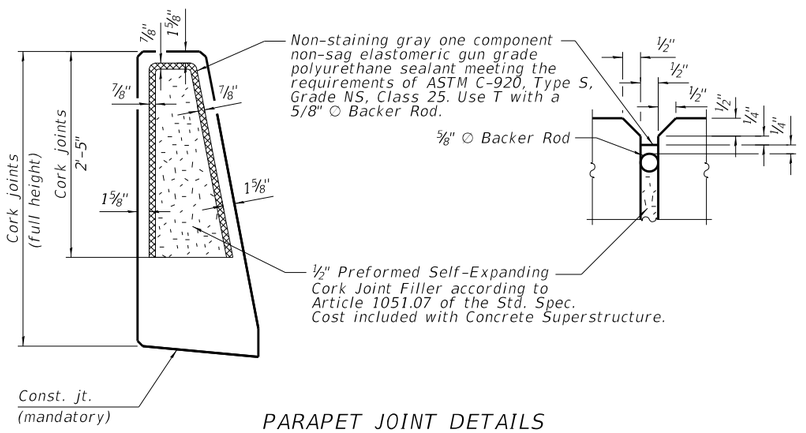
*See plan and elevation sheets for placement.
See Detail Sheet 3 for Table of Elevations for A, B, C & D.

SECTION A-A
TYPICAL SECTION THRU ANCHORAGE SLAB

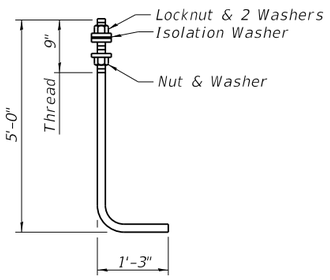
*Expansion caps shall be installed on the exposed end of each dowel bar once the header has been removed.



ELEVATION OF JOINTS IN PARAPET AND ANCHORAGE SLAB



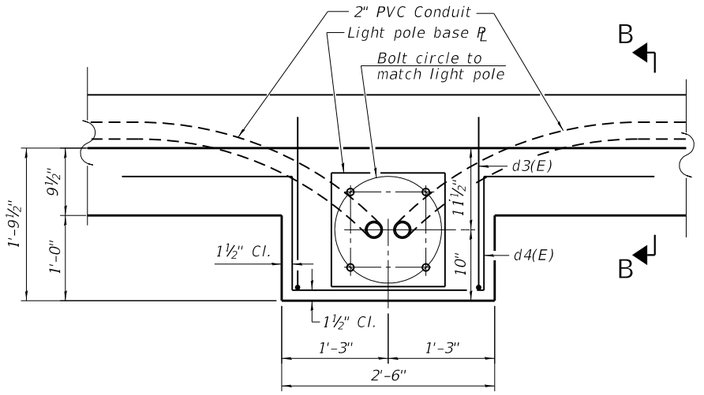
PARAPET JOINT DETAILS



ANCHOR ROD

Diameter as specified for light poles.
(ASTM F 1554 Grade 105)
Full Length Hot Dipped Galvanized.
4-Anchor Rods per pole foundation.
Cost of anchor rods is included with Concrete Superstructure.

SECTION B-B



LIGHT POLE PLAN

Note:
Cost of anchor rods and conduit is included with Concrete Superstructure.

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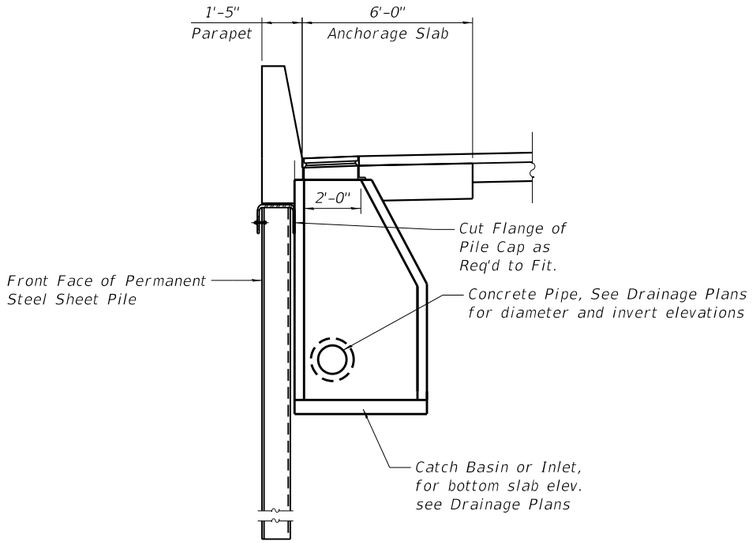
PLOT DATE =		CHECKED - RJO	REVISED -	

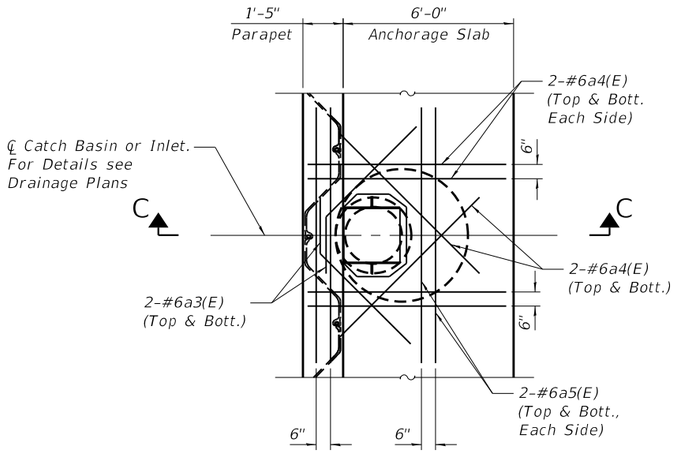
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB DETAILS
1 OF 3
SHEET S-8 OF S-14 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	265
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		



SECTION C-C



ANCHORAGE SLAB AT CATCH BASIN

(5 Locations)

*Adjust drainage structure station to avoid conflicts with Permanent Sheet Piling as directed by engineer.

Drainage Structure Location
(See Drainage Sheets for Additional Details)

Structure	Station	Offset
DS-330	152+95.0	29.0' LT
DS-331	155+45.0	28.0' LT
DS-332	157+40.0	28.0' LT
DS-333	158+60.0	29.0' LT
DS-360	156+00.0	28.0' LT

GARZA KARHOFF ENGINEERING, LLC

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PLOT DATE =	CHECKED - RJO	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB DETAILS
2 OF 3
SHEET S-9 OF S-14 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	266
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

ANCHORAGE SLAB CONTROL POINT STATIONS, OFFSETS, & ELEVATIONS

INSIDE FACE OF BARRIER (A)

Location	Station	Offset	Elevation
A1	151+49.29	30.00' LT	650.89
A2	151+64.54	30.00' LT	650.87
A3	151+79.79	30.00' LT	650.84
A4	151+95.04	30.00' LT	650.79
A5	152+10.29	30.00' LT	650.73
A6	152+25.54	30.00' LT	650.65
A7	152+40.79	30.00' LT	650.58
A8	152+56.04	30.00' LT	650.51
A9	152+71.29	30.00' LT	650.44
A10	152+86.54	30.00' LT	650.37
A11	153+01.79	30.00' LT	650.30
A12	153+17.04	30.00' LT	650.23
A13	153+32.29	30.00' LT	650.15
A14	153+47.54	30.00' LT	650.08
A15	153+62.79	30.00' LT	650.01
A16	153+78.04	30.00' LT	649.94
A17	153+93.29	30.00' LT	649.87
A18	154+08.54	30.00' LT	649.80
A19	154+23.79	30.00' LT	649.73
A20	154+39.04	30.00' LT	649.65
A21	154+54.29	30.00' LT	649.58
A22	154+69.54	30.00' LT	649.51
A23	154+84.79	30.00' LT	649.44
A24	155+00.04	30.00' LT	649.37
A25	155+15.29	30.00' LT	649.30
A26	155+30.54	30.00' LT	649.23
A27	155+45.79	30.00' LT	649.15
A28	155+61.04	30.00' LT	649.08
A29	155+76.29	30.00' LT	649.01
A30	155+91.54	30.00' LT	648.94
A31	156+08.20	30.00' LT	648.86
A32	156+62.47	30.00' LT	648.61
A33	156+81.44	30.00' LT	648.52
A34	156+98.19	30.00' LT	648.44
A35	157+14.94	30.00' LT	648.36
A36	157+31.69	30.00' LT	648.28
A37	157+48.44	30.00' LT	648.21
A38	157+65.19	30.00' LT	648.13
A39	157+81.94	30.00' LT	648.05
A40	157+98.69	30.00' LT	647.97
A41	158+15.44	30.00' LT	647.89
A42	158+32.19	30.00' LT	647.81
A43	158+48.94	30.00' LT	647.74
A44	158+65.69	30.00' LT	647.66
A45	158+82.44	30.00' LT	647.58
A46	158+99.19	30.00' LT	647.50
A47	159+15.94	30.00' LT	647.42
A48	159+32.69	30.00' LT	647.34
A49	159+49.44	30.00' LT	647.27
A50	159+66.19	30.00' LT	647.19
A51	159+82.94	30.00' LT	647.11
A52	159+99.69	30.00' LT	647.03

EDGE OF SHOULDER (B)

Location	Station	Offset	Elevation
B1	151+49.29	28.00' LT	651.01
B2	151+64.54	28.00' LT	650.99
B3	151+79.79	28.00' LT	650.96
B4	151+95.04	28.00' LT	650.91
B5	152+10.29	28.00' LT	650.85
B6	152+25.54	28.00' LT	650.77
B7	152+40.79	28.00' LT	650.70
B8	152+56.04	28.00' LT	650.63
B9	152+71.29	28.00' LT	650.56
B10	152+86.54	28.00' LT	650.49
B11	153+01.79	28.00' LT	650.42
B12	153+17.04	28.00' LT	650.35
B13	153+32.29	28.00' LT	650.27
B14	153+47.54	28.00' LT	650.20
B15	153+62.79	28.00' LT	650.13
B16	153+78.04	28.00' LT	650.06
B17	153+93.29	28.00' LT	649.99
B18	154+08.54	28.00' LT	649.92
B19	154+23.79	28.00' LT	649.85
B20	154+39.04	28.00' LT	649.77
B21	154+54.29	28.00' LT	649.70
B22	154+69.54	28.00' LT	649.63
B23	154+84.79	28.00' LT	649.56
B24	155+00.04	28.00' LT	649.49
B25	155+15.29	28.00' LT	649.42
B26	155+30.54	28.00' LT	649.35
B27	155+45.79	28.00' LT	649.27
B28	155+61.04	28.00' LT	649.20
B29	155+76.29	28.00' LT	649.13
B30	155+91.54	28.00' LT	649.06
B31	156+08.20	28.00' LT	648.98
B32	156+62.47	28.00' LT	648.73
B33	156+81.44	28.00' LT	648.64
B34	156+98.19	28.00' LT	648.56
B35	157+14.94	28.00' LT	648.48
B36	157+31.69	28.00' LT	648.40
B37	157+48.44	28.00' LT	648.33
B38	157+65.19	28.00' LT	648.25
B39	157+81.94	28.00' LT	648.17
B40	157+98.69	28.00' LT	648.09
B41	158+15.44	28.00' LT	648.01
B42	158+32.19	28.00' LT	647.93
B43	158+48.94	28.00' LT	647.86
B44	158+65.69	28.00' LT	647.78
B45	158+82.44	28.00' LT	647.70
B46	158+99.19	28.00' LT	647.62
B47	159+15.94	28.00' LT	647.54
B48	159+32.69	28.00' LT	647.46
B49	159+49.44	28.00' LT	647.39
B50	159+66.19	28.00' LT	647.31
B51	159+82.94	28.00' LT	647.23
B52	159+99.69	28.00' LT	647.15

EDGE OF PAVEMENT (C)

Location	Station	Offset	Elevation
C1	151+49.29	24.00' LT	651.09
C2	151+64.54	24.00' LT	651.07
C3	151+79.79	24.00' LT	651.04
C4	151+95.04	24.00' LT	650.99
C5	152+10.29	24.00' LT	650.93
C6	152+25.54	24.00' LT	650.85
C7	152+40.79	24.00' LT	650.78
C8	152+56.04	24.00' LT	650.71
C9	152+71.29	24.00' LT	650.64
C10	152+86.54	24.00' LT	650.57
C11	153+01.79	24.00' LT	650.50
C12	153+17.04	24.00' LT	650.43
C13	153+32.29	24.00' LT	650.35
C14	153+47.54	24.00' LT	650.28
C15	153+62.79	24.00' LT	650.21
C16	153+78.04	24.00' LT	650.14
C17	153+93.29	24.00' LT	650.07
C18	154+08.54	24.00' LT	650.00
C19	154+23.79	24.00' LT	649.93
C20	154+39.04	24.00' LT	649.85
C21	154+54.29	24.00' LT	649.78
C22	154+69.54	24.00' LT	649.71
C23	154+84.79	24.00' LT	649.64
C24	155+00.04	24.00' LT	649.57
C25	155+15.29	24.00' LT	649.50
C26	155+30.54	24.00' LT	649.43
C27	155+45.79	24.00' LT	649.35
C28	155+61.04	24.00' LT	649.28
C29	155+76.29	24.00' LT	649.21
C30	155+91.54	24.00' LT	649.14
C31	156+08.20	24.00' LT	649.06
C32	156+62.47	24.00' LT	648.81
C33	156+81.44	24.00' LT	648.72
C34	156+98.19	24.00' LT	648.64
C35	157+14.94	24.00' LT	648.56
C36	157+31.69	24.00' LT	648.48
C37	157+48.44	24.00' LT	648.41
C38	157+65.19	24.00' LT	648.33
C39	157+81.94	24.00' LT	648.25
C40	157+98.69	24.00' LT	648.17
C41	158+15.44	24.00' LT	648.09
C42	158+32.19	24.00' LT	648.01
C43	158+48.94	24.00' LT	647.94
C44	158+65.69	24.00' LT	647.86
C45	158+82.44	24.00' LT	647.78
C46	158+99.19	24.00' LT	647.70
C47	159+15.94	24.00' LT	647.62
C48	159+32.69	24.00' LT	647.54
C49	159+49.44	24.00' LT	647.47
C50	159+66.19	24.00' LT	647.39
C51	159+82.94	24.00' LT	647.31
C52	159+99.69	24.00' LT	647.23

BOTTOM OF ANCHORAGE SLAB AT F.F. OF WALL (D)

Location	Station	Offset	Elevation
D1	151+49.29	31.42' LT	649.64
D2	151+64.54	31.42' LT	649.62
D3	151+79.79	31.42' LT	649.59
D4	151+95.04	31.42' LT	649.54
D5	152+10.29	31.42' LT	649.48
D6	152+25.54	31.42' LT	649.40
D7	152+40.79	31.42' LT	649.33
D8	152+56.04	31.42' LT	649.26
D9	152+71.29	31.42' LT	649.19
D10	152+86.54	31.42' LT	649.12
D11	153+01.79	31.42' LT	649.05
D12	153+17.04	31.42' LT	648.98
D13	153+32.29	31.42' LT	648.90
D14	153+47.54	31.42' LT	648.83
D15	153+62.79	31.42' LT	648.76
D16	153+78.04	31.42' LT	648.69
D17	153+93.29	31.42' LT	648.62
D18	154+08.54	31.42' LT	648.55
D19	154+23.79	31.42' LT	648.48
D20	154+39.04	31.42' LT	648.40
D21	154+54.29	31.42' LT	648.33
D22	154+69.54	31.42' LT	648.26
D23	154+84.79	31.42' LT	648.19
D24	155+00.04	31.42' LT	648.12
D25	155+15.29	31.42' LT	648.05
D26	155+30.54	31.42' LT	647.98
D27	155+45.79	31.42' LT	647.90
D28	155+61.04	31.42' LT	647.83
D29	155+76.29	31.42' LT	647.76
D30	155+91.54	31.42' LT	647.69
D31	156+08.20	31.42' LT	647.61
D32	156+62.47	31.42' LT	647.36
D33	156+81.44	31.42' LT	647.27
D34	156+98.19	31.42' LT	647.19
D35	157+14.94	31.42' LT	647.11
D36	157+31.69	31.42' LT	647.03
D37	157+48.44	31.42' LT	646.96
D38	157+65.19	31.42' LT	646.88
D39	157+81.94	31.42' LT	646.80
D40	157+98.69	31.42' LT	646.72
D41	158+15.44	31.42' LT	646.64
D42	158+32.19	31.42' LT	646.56
D43	158+48.94	31.42' LT	646.49
D44	158+65.69	31.42' LT	646.41
D45	158+82.44	31.42' LT	646.33
D46	158+99.19	31.42' LT	646.25
D47	159+15.94	31.42' LT	646.17
D48	159+32.69	31.42' LT	646.09
D49	159+49.44	31.42' LT	646.02
D50	159+66.19	31.42' LT	645.94
D51	159+82.94	31.42' LT	645.86
D52	159+99.69	31.42' LT	645.78

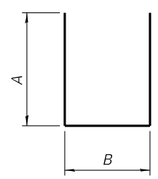
Notes:
The minimum effective section modulus of the permanent sheet pile wall shall be 30.2 in.³/ft.
The cost of furnishing and installing the bent ℄ sheet pile cap, elastomeric mat, and filter fabric shall be included in the cost of the pay item Permanent Steel Sheet Piling.

BAR LIST

Bar	No.	Size	Length	Shape
a1(E)	801	#5	7'-2"	
a2(E)	961	#6	8'-1"	
a3(E)	20	#6	6'-6"	
a4(E)	60	#6	7'-0"	
a5(E)	40	#6	9'-0"	
b1(E)	320	#5	30'-0"	
b2(E)	48	#5	30'-0"	
b3(E)	16	#5	32'-3"	
b4(E)	16	#5	24'-0"	
b5(E)	80	#5	22'-6"	
d(E)	1,216	#5	7'-7¾"	
d1(E)	1,216	#5	10'-3⅜"	
d2(E)	801	#5	3'-0"	
d3(E)	12	#6	6'-0"	
d4(E)	36	#6	8'-11"	
e(E)	114	#4	16'-6"	
e1(E)	80	#4	30'-0"	
e2(E)	6	#4	18'-8½"	
e3(E)	12	#4	28'-4"	
e4(E)	174	#4	15'-0"	
e5(E)	4	#4	30'-7"	
e6(E)	6	#4	16'-5"	
e7(E)	4	#4	22'-3"	
e8(E)	20	#4	20'-10"	
s(E)	4	#5	10'-8"	
s1(E)	6	#5	10'-11"	
s2(E)	6	#5	22'-5"	
s3(E)	4	#5	11'-5	
s4(E)	4	#5	20'-0"	
s5(E)	4	#5	13'-8"	

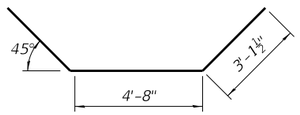
BILL OF MATERIAL

Item	Unit	Total
Concrete Superstructure	Cu. Yd.	397.1
Reinforcement Bars, Epoxy Coated	Pound	65,050
Permanent Sheet Piling	Sq. Ft.	32,581
Stud Shear Connectors	Each	76

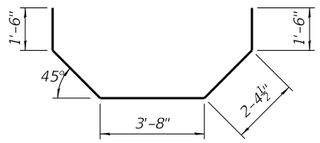


Bar	A	B
s(E)	3'-6"	3'-8"
s2(E)	6'-6"	9'-5"
s4(E)	6'-0"	8'-0"
s5(E)	4'-6"	4'-8"

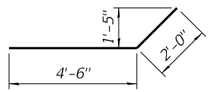
BARS s(E), s2(E), s4(E), s5(E)



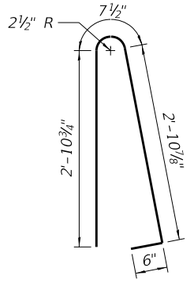
Bar s1(E)



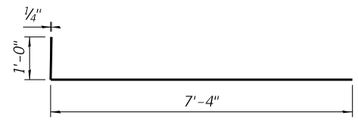
Bar s3(E)



Bar a3(E)



BAR d(E)



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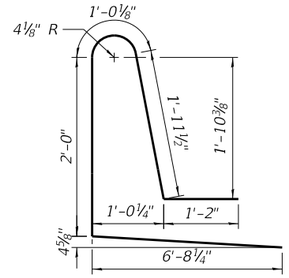

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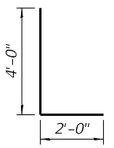

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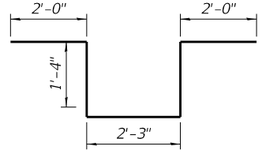

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GARZA KARHOFF ENGINEERING, LLC

USER NAME =		DESIGNED - RJO	REVISED -	
		CHECKED - ZC	REVISED -	
PLOT SCALE =		DRAWN - AMF	REVISED -	
PLOT DATE =		CHECKED - RJO	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB DETAILS
3 OF 3
SHEET S-10 OF S-14 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	267
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-2848

GSI Job No. 19083

SOIL BORING LOG

Page 1 of 1

Date 10/24/19

ROUTE 3533 DESCRIPTION Franklin Avenue Reconstruction From Acorn Lane to Mannheim Road LOGGED BY TC

SECTION 17-00083-00-PV LOCATION SW 1/4, SEC. 20, TWP. T40N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.
Station

BORING NO. RWB-001
Station 151+49
Offset 21.20ft Left
Ground Surface Elev. 650.90 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 639.9 ft ▼
Upon Completion 630.9 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
650.23			
8.0" ASPHALT			
	5		
SILTY CLAY-dark brown & gray-stiff	5	1.5	21
	5	B	
647.90			
SILTY LOAM-brown & gray-medium dense	4		
	6		18
-5	6		
645.40			
SANDY CLAY LOAM-brown & gray-very stiff	4		
	7	2.4	12
	11	S	
642.90			
SILTY SAND with Gravel-brown & gray-medium dense	9		
	8		12
-10	10		
▼	5		
	8		14
	10		
637.90			
CLAY-gray-stiff	3		
	5	1.7	19
-15	8	B	
	3		
	5	1.8	21
	8	B	
	5		
▽ -20	9	1.5 B	20

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY-gray-stiff *(continued)*			
	3		
	5	1.0	19
	8	B	
-25	5	1.3	19
	6	B	
625.40			
SILTY LOAM with Sand Seams-gray-medium dense	6		
	5		15
	4		
622.90			
SILTY CLAY-gray-very stiff	6		
	10	2.8	15
-30	17	B	
618.90			
SILTY LOAM-gray-very dense	26		
	37		16
-35	43		
613.90			
SILTY CLAY LOAM-gray-hard	13		
	12	4.5	14
End Of Boring @ -40.0'. Boring backfilled with cuttings. 610.90	14	P	
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
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(630) 355-2848

GSI Job No. 19083

SOIL BORING LOG

Page 1 of 1

Date 10/24/19

ROUTE 3533 DESCRIPTION Franklin Avenue Reconstruction From Acorn Lane to Mannheim Road LOGGED BY TC

SECTION 17-00083-00-PV LOCATION SW 1/4, SEC. 20, TWP. T40N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.
Station

BORING NO. RWB-002
Station 153+03
Offset 20.90ft Left
Ground Surface Elev. 650.28 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 612.3 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
649.61			
8.0" ASPHALT			
CLAY LOAM-dark brown, gray & black-hard (Fill)	11		
	12	4.5	19
	6	P	
647.28			
SILTY CLAY-dark brown & gray-stiff	2		
	3	1.7	23
-5	3	B	
644.78			
CLAY LOAM-brown-stiff to hard	4		
	7	2.1	11
	7	B	
	4		
	8	4.0	20
-10	10	B	
	5		
	9	5.0	18
	11	B	
becoming gray @ -13.0'	3		
	5	2.2	18
-15	7	B	
	2		
	3	2.2	19
	6	B	
silt seams from -18.5' to -20.0'	4		
	5	1.5	18
-20	4	B	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY LOAM-brown-stiff to hard *(continued)*			
	3		
	4	1.6	16
	5	B	
	3		
-25	4	2.1	19
	6	B	
	3		
623.28	5	3.2	16
SILT-gray-dense to very dense	7	B	
	4		
	23		17
-30	25		
	25		
615.78	39		15
SILTY LOAM-dark gray-very dense	40		
-35			
▼	25		
End Of Boring @ -40.0'. Boring backfilled with cuttings. 610.28	33		10
-40	35		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)

GARZA KARHOFF ENGINEERING, LLC	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS 1 OF 4
		CHECKED -	REVISED -		
	PLOT SCALE =	DRAWN - AMF	REVISED -		SHEET S-11 OF S-14 SHEETS
	PLOT DATE =	CHECKED -	REVISED -		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	268
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-2848

GSI Job No. 19083

SOIL BORING LOG

Page 1 of 1

Date 10/24/19

ROUTE 3533 DESCRIPTION Franklin Avenue Reconstruction From Acorn Lane to Mannheim Road LOGGED BY TC

SECTION 17-00083-00-PV LOCATION SW 1/4, SEC. 20, TWP. T40N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.
Station

BORING NO. RWB-003
Station 154+47
Offset 20.60ft Left
Ground Surface Elev. 649.17 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 611.2 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
8.0" ASPHALT 648.50			
SILTY CLAY (Topsoil)-black (A-7) Organic Content=8.5%	5		
	6 11	2.3 P	24
	3		
-5	4 6	1.8 P	31
643.17 SILTY CLAY-brown & gray-very stiff	3		
	5 7	3.1 B	21
641.17 CLAY LOAM-brown-stiff to very stiff	5		
-10	4 7	3.7 B	20
	8		
	8 8	3.5 B	20
becoming gray @ -13.0'	4		
-15	5 5	1.8 B	19
	3		
	6 6	1.8 B	18
	4		
-20	4 4	1.8 B	17

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY LOAM-brown-stiff to very stiff *(continued)*			
	4		
	5 8	2.2 B	19
	3		
-25	4 7	1.9 B	18
	4		
	5 8	2.7 B	17
621.17 SILT-gray-very dense	21		
-30	39 39		15
617.17 SILTY LOAM-gray-medium dense to dense	8		
-35	6 8		3
	21		
End Of Boring @ -40.0'. Boring backfilled with cuttings. 609.17	-40 31 23		9

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger
BBS, from 137 (Rev. 8-99)

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
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(630) 355-2848

GSI Job No. 19083

SOIL BORING LOG

Page 1 of 1

Date 10/23/19

ROUTE 3533 DESCRIPTION Franklin Avenue Reconstruction From Acorn Lane to Mannheim Road LOGGED BY TC

SECTION 17-00083-00-PV LOCATION SW 1/4, SEC. 20, TWP. T40N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.
Station

BORING NO. RWB-004
Station 157+44
Offset 22.70ft Left
Ground Surface Elev. 647.30 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 636.3 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
6.0" SILTY SAND & GRAVEL-dark brown to black 646.63			8
SILTY CLAY-dark brown, gray & black-stiff to very stiff (Fill)	4		
	4 6	3.0 P	21
	3		
-5	3 4	1.3 P	28
641.80 SILTY CLAY-brown & gray-medium stiff	2		
	2 3	0.7 B	32
silt seams from -8.5' to -10.0'	2		
-10	2 3	0.8 B	29
636.80 CLAYEY SAND & GRAVEL-dark gray to black-medium dense ▼	4		
	8 8		12
634.30 CLAY-gray-very stiff	4		
	7 7	2.0 B	19
-15	4		
	7 8	2.2 B	20
	3		
-20	6 8	2.2 B	20

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY-gray-very stiff *(continued)* 626.80			
CLAY LOAM with Sand Seams-gray-medium dense	4		
	6 7		15
624.30 CLAYEY SAND & GRAVEL-gray-medium dense	10		
	10 10		17
-25			
621.80 SILTY CLAY LOAM-gray-stiff	7		
	12 14	2.7 S	13
619.30 SANDY CLAY LOAM-dark gray-medium dense	9		
	12 12		12
-30			
615.30 SILTY LOAM-gray-medium dense	6		
	12 13		13
-35			
610.30 CLAY LOAM-gray-very stiff	13		
End Of Boring @ -40.0'. Boring backfilled with cuttings. 607.30	-40 13 18	3.6 B	16

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger
BBS, from 137 (Rev. 8-99)

GARZA KARHOFF ENGINEERING, LLC

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
2 OF 4
SHEET S-12 OF S-14 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	269
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-2818

SOIL BORING LOG

GSI Job No. 19083

Date 10/23/19

ROUTE 3533 **DESCRIPTION** Franklin Avenue Reconstruction From Acorn Lane to Mannheim Road **LOGGED BY** TC

SECTION 17-00083-00-PV **LOCATION** SW 1/4, **SEC.** 20, **TWP.** T40N, **RNG.** R12E, 3rd **PM**

COUNTY Cook **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME Automatic

STRUCT. NO. _____
Station _____

BORING NO. RWB-005
Station 158+92
Offset 27.90ft Left
Ground Surface Elev. 647.12 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 626.1 ft ▼
Upon Completion 627.1 ft ▽
After _____ **Hrs.** _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
6.0" SAND, GRAVEL & ASPHALT-dark gray to black	646.62			4
CLAY LOAM with Asphalt & Stone-black-medium dense (Fill)		6		
		10	4.5	10
		13	P	
TOPSOIL-black-loose	644.12			
		4		
		4	2.5	40
	-5	4	P	
SILTY CLAY-brown & gray-stiff to very stiff	641.62			
		2		
		2	1.3	29
		3	B	
		2		
		2	1.3	25
	-10	3	B	
CLAY to CLAY LOAM-gray-stiff to very stiff	636.62			
		5		
		7	2.5	19
		8	B	
		5		
		5	2.2	20
	-15	9	B	
		4		
		8	2.2	18
		8	B	
		4		
		5	1.6	22
	▽ -20	5	B	
	626.62			
SILT-gray-medium dense to very dense	▼	8		
		8		20
		9		
		6		
		6		19
	-25	6		
		7		
		23		16
		26		
		21		
		35		17
	-30	50/5"		
	615.12			
SILTY CLAY LOAM-gray-dense		11		
		16	4.5	12
	-35	20	P	
	610.12			
CLAY LOAM-gray-hard		15		
End Of Boring @ -40.0'. Boring backfilled with cuttings.	607.12 -40	15	4.2	13
		18	B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger
BBS, from 137 (Rev. 8-99)

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PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
3 OF 4
SHEET S-13 OF S-14 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	270
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

Geo Services, Inc.
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Naperville, Illinois 60565
(630) 355-2848

GSI Job No. 19083

SOIL BORING LOG

Page 1 of 1

Date 8/13/19

ROUTE 3533 DESCRIPTION Franklin Avenue Reconstruction From Acorn Lane to Mannheim Road LOGGED BY TC

SECTION 17-00083-00-PV LOCATION SW 1/4, SEC. 20, TWP. T40N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO.
Station

BORING NO. CB-001
Station 156+18
Offset 22.30ft Left
Ground Surface Elev. 647.36 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter Dry to -10.0' ft
Upon Completion n/a ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SANDY TOPSOIL with GRAVEL-black (Fill)				19
646.36				
SILTY CLAY-dark brown, gray & spotted black-stiff (Fill)		2		
		3	1.3	21
		4	P	
		2		
	-5	3	1.2	27
		4	B	
641.86				
ORGANIC SILTY CLAY-black-medium stiff		2		
		2	0.6	40
		2	B	
becoming dark brown & gray @ -8.0'		1		
		1	0.5	34
	-10	1	B	
636.86				
SANDY LOAM-gray (A-2-4)		ST		
				18
634.36				
CLAY-gray-stiff		5		
		5	1.3	18
	-15	6	P	
		4		
		6	1.5	20
		6	B	
		5		
	-20	6	1.5	23
		7	B	

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY-gray-stiff *(continued)*				
		8		
		6		20
		6		
		3		
	-25	5	1.7	18
		6	B	
		4		
		7	1.3	18
		9	B	
619.36				
SILT-gray-very dense		30		
		36		18
	-30	44		
615.36				
SILTY CLAY LOAM-gray-dense		11		
		14	4.5	13
	-35	24	P	
		15		
End Of Boring @ -40.0'. Boring backfilled with cuttings. 607.36	-40	20	2.3	13
		16	P	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger
BBS, from 137 (Rev. 8-99)

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
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Naperville, Illinois 60565
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GSI Job No. 19083

SOIL BORING LOG

Page 1 of 1

Date 8/5/19

ROUTE 3533 DESCRIPTION Franklin Avenue Reconstruction From Acorn Lane to Mannheim Road LOGGED BY ML

SECTION 17-00083-00-PV LOCATION SW 1/4, SEC. 20, TWP. T40N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO.
Station

BORING NO. CB-002
Station 157+09
Offset 15.20ft Left
Ground Surface Elev. 647.62 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 641.6 ft ▼
Upon Completion n/a ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
5.0" ASPHALT 647.20				
CLAY LOAM with Gravel-dark brown & gray spotted black-loose to very dense (Fill)		1		
		3		12
		4		
		50+		
	-5			9
642.12				
SILTY CLAY with Organics-gray-stiff ▼		1		
		2	1.2	25
		4	B	
619.62				
SILTY LOAM-gray-dense to very dense		1		
		3	1.5	23
	-10	4	P	
637.12				
SILTY SAND & GRAVEL-dark gray-loose		0		
		0		NR
		1		
		5		
		6		13
	-15	8		
632.12				
CLAY to CLAY LOAM-gray-very stiff		2		
		4	2.5	19
		10	P	
609.62				
CLAYEY GRAVEL-gray-dense		3		
		4	2.0	21
End Of Boring @ -40.0'. Boring backfilled with cuttings. 607.62	-20	5	P	

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY to CLAY LOAM-gray-very stiff *(continued)*				
		3		
		4	2.3	17
		7	P	
		9		
		7	2.5	18
	-25	8	P	
		7		
		8	2.0	18
		13	P	
619.62				
SILTY LOAM-gray-dense to very dense		22		
		38		17
	-30	39		
		34		
		27		20
	-35	24		
		23		
		24		10
End Of Boring @ -40.0'. Boring backfilled with cuttings. 607.62	-40	25		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger
BBS, from 137 (Rev. 8-99)

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USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN - AMF	REVISED -
PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
4 OF 4
SHEET S-14 OF S-14 SHEETS

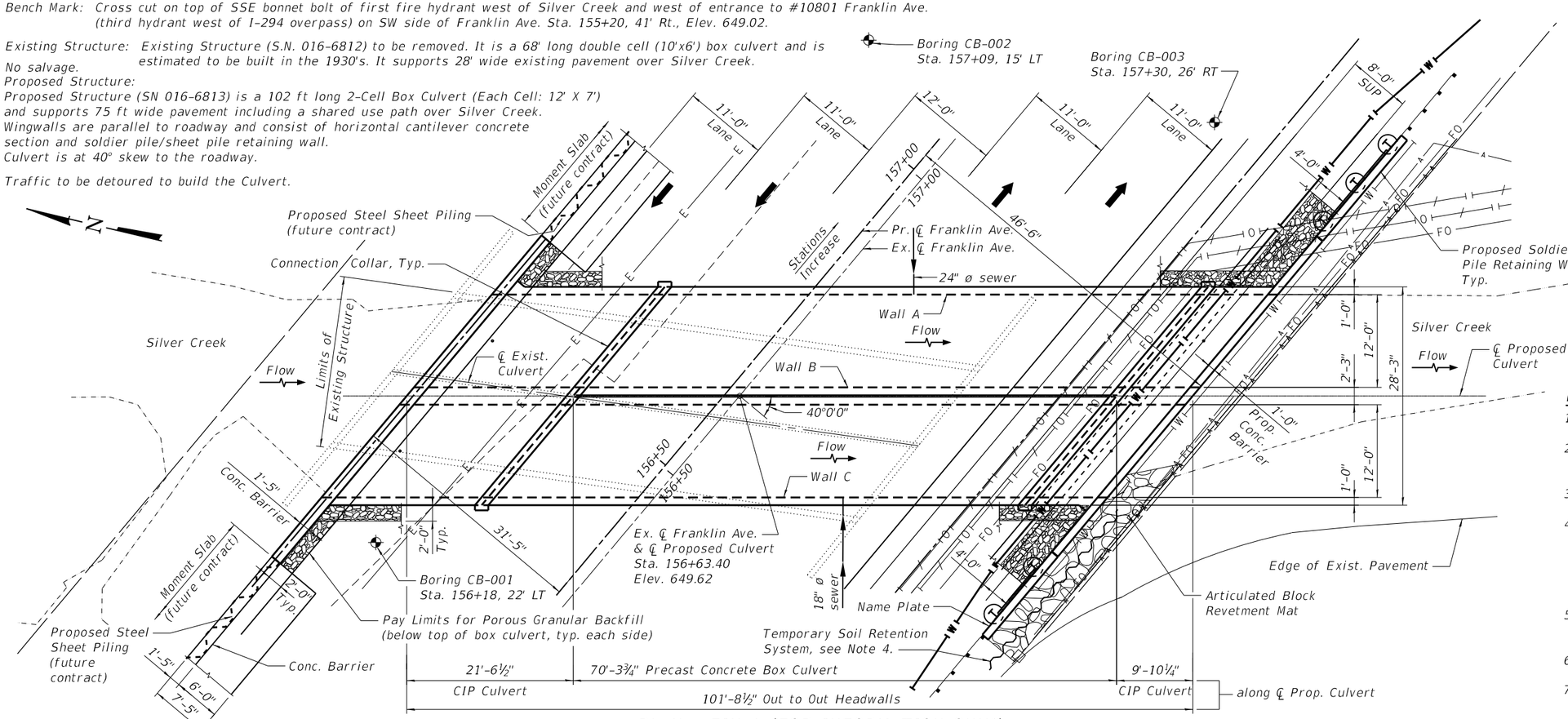
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	271
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

Bench Mark: Cross cut on top of SSE bonnet bolt of first fire hydrant west of Silver Creek and west of entrance to #10801 Franklin Ave. (third hydrant west of I-294 overpass) on SW side of Franklin Ave. Sta. 155+20, 41' Rt., Elev. 649.02.

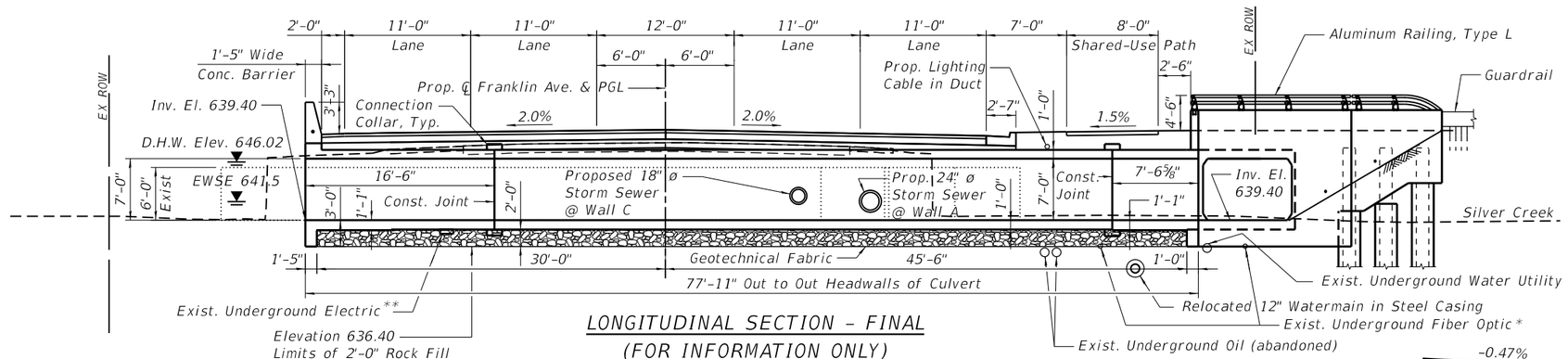
Existing Structure: Existing Structure (S.N. 016-6812) to be removed. It is a 68' long double cell (10'x6') box culvert and is estimated to be built in the 1930's. It supports 28' wide existing pavement over Silver Creek. No salvage.

Proposed Structure:
Proposed Structure (SN 016-6813) is a 102 ft long 2-Cell Box Culvert (Each Cell: 12' X 7') and supports 75 ft wide pavement including a shared use path over Silver Creek. Wingwalls are parallel to roadway and consist of horizontal cantilever concrete section and soldier pile/sheet pile retaining wall. Culvert is at 40° skew to the roadway.

Traffic to be detoured to build the Culvert.



PLAN - FINAL (FOR INFORMATION ONLY)



LONGITUDINAL SECTION - FINAL (FOR INFORMATION ONLY)

(Section taken along ℄ Proposed Culvert looking East, all horizontal dimensions and cross slopes are at Rt. L's to ℄ Rdwy.)

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

DESIGN STRESSES

PRECAST UNITS

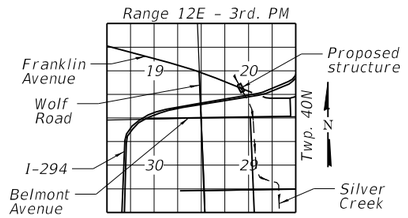
f'c = 5,000 psi (Class PC)
fy = 65,000 psi (Welded Wire Reinforcement)

FIELD UNITS

f'c = 4,000 psi (Class BS - North Barrier above top construction joint)
f'c = 3,500 psi (Class SI - All other elements)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50, Soldier Pile)

NOTES:

1. The design fill height for this box culvert varies from 1'-4" to 2'-4".
2. The precast box culvert sections shall conform to the requirements of ASTM C 1577. See Special Provisions.
3. Factored Bearing Resistance of soil with Rock Fill under the culvert = 4,000 psi.
4. A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.
5. Roadway width and lane configurations shown are for final geometry of Franklin Avenue. For interim roadway configuration, see Roadway Plans.
6. Stations and offsets are based on ℄ Existing Franklin Ave.
7. The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions encountered in the field.



LOCATION SKETCH

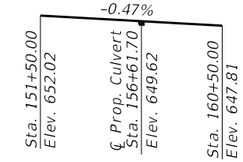
GENERAL PLAN AND ELEVATION (FOR INFORMATION ONLY) FRANKLIN AVENUE BOX CULVERT OVER SILVER CREEK F.A.U. RTE. 3533 (FRANKLIN AVE.) COOK COUNTY STATION 156+63.40 STRUCTURE NO. 016-6813

LEGEND:

- E — Exist. Underground Electric
- FO — Exist. Underground Fiber Optic
- O — Exist. Underground Oil (abandoned)
- A — A — Exist. Aerial Lines
- W — Exist. Underground Water Utility
- W — Relocated Underground Water Utility
- Proposed Lighting Cable in Duct
- Prop. Guardrail
- Exist. Power Pole
- Existing ROW
- Soil Boring
- Proposed Storm Sewer

* This utility may conflict with proposed construction and may require coordination with utility owner.

** Contractor to coordinate with Comed for protection of the duct during construction.



PROFILE GRADE

(along ℄ Franklin Ave.)

exp U.S. Services Inc. Chicago, IL
BUILDINGS • EARTH & ENVIRONMENT • ENERGY INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY

USER NAME =	DESIGNED - YMC	REVISED -	
	CHECKED -	REVISED -	
PLOT SCALE =	DRAWN - FD	REVISED -	
PLOT DATE =	CHECKED - KK	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY - GENERAL PLAN AND LONGITUDINAL SECTION - FINAL - SILVER CREEK BOX CULVERT

SHEET OF SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	272
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

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TOTAL BILL OF MATERIAL

	ITEM	UNIT	TOTAL
	Porous Granular Backfill	Cu Yd	173
	Geotechnical Fabric for Ground Stabilization	Sq Yd	438
*	Removal of Existing Structures	Each	1
	Structure Excavation	Cu Yd	552
	Removal and Disposal of Unsuitable Material for Structures	Cu Yd	251
	Concrete Structures	Cu Yd	11.3
	Concrete Superstructure	Cu Yd	12.1
	Protective Coat	Sq Yd	61
	Stud Shear Connectors	Each	32
	Reinforcement Bars, Epoxy Coated	Pound	41,490
	Aluminum Railing, Type L	Foot	83
	Name Plates	Each	1
	Temporary Soil Retention System	Sq Ft	131
	Furnishing Soldier Piles (W Section)	Foot	130
	Drilling and Setting Soldier Piles (In Soil)	Cu Ft	501
	Untreated Timber Lagging	Sq Ft	166
	Concrete Box Culverts	Cu Yd	146.9
	Concrete Sealer	Sq Ft	607
	Geocomposite Wall Drain	Sq Yd	19
	Membrane Waterproofing System for Buried Structures	Sq Yd	349
	Precast Concrete Box Culverts 12' X 7' (Special)	Foot	141
	Rock Fill	Cu Yd	251

* Removal of Existing Structures includes removal of existing culvert, wingwalls, headwalls and guardrail connected to the structure.

SILVER CREEK
BUILT 20__ BY
VILLAGE OF FRANKLIN PARK
SEC. 17-00083-01-BR
STATION 156+63.40
S.N. 016-6813 LOADING HL-93

NAME PLATE
See Std. 515001

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.

2. The Contractor is responsible for the design and performance of the lagging using no less than a 3 in. nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1,000 psi.

3. The clear cover for the reinforcement bars to the surface of concrete shall be 2" unless otherwise shown.

4. Protective Coat shall be applied to top and traffic faces of concrete barrier on both ends of the culvert.

5. Concrete Sealer shall be applied to the exposed front face of the wingwalls and Soldier Pile Retaining Walls.

6. Drain holes shall be provided on exterior culvert walls for each precast box segment. The drain hole shall be located within 1/3 of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specification. See Special Provisions.
Cost included with Precast Box Culverts 12'x7" (Special).

7. Nonwoven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

8. Precast concrete box culverts, cast-in-place box culverts, and soldier pile walls shall be backfilled with Porous Granular Backfill below the top of the box culvert extending to a vertical plane 2 ft from the exterior sides of the culvert, 2 ft from the back face of north wingwalls, and 4 ft from the back face of south horizontal cantilever wingwalls and soldier pile walls.

9. The box culvert end section shall be built in the field and a precast option is not allowed.

INDEX OF SHEETS:

WATERWAY INFORMATION

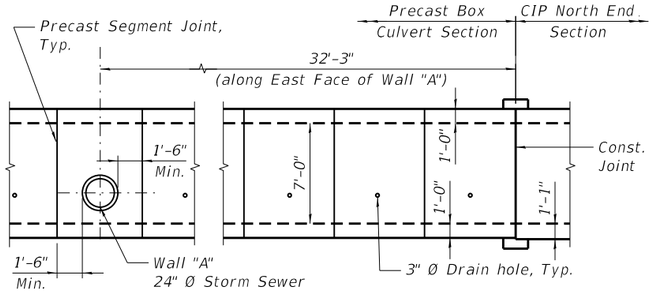
Drainage Area = 5.44 sq. mi Low Grade Elev. 647.92 @ Sta. 160+62

Flood	Freq. Yr.	Q C.F.S.	Opening Ft² Exist.	Opening Ft² Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
10-Yr	10	355	133.2	144.5	645.39	0.05	0.03	645.44	645.42
Design	30	496	133.2	158.9	645.97	0.13	0.05	646.10	646.02
Base	100	655	133.2	164.9	646.22	0.32	0.11	647.10	646.89
Overtopping									
Max. Calc.	500	875	133.2	168	647.83	0.41	0.29	648.24	648.12

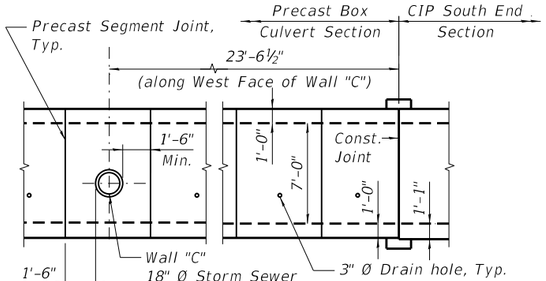
** Backfill remainder of structure excavation and over excavation with excavated material or as specified for roadway embankment.

*** See Roadway Plans for pavement elevations and grading around the culvert in this contract.

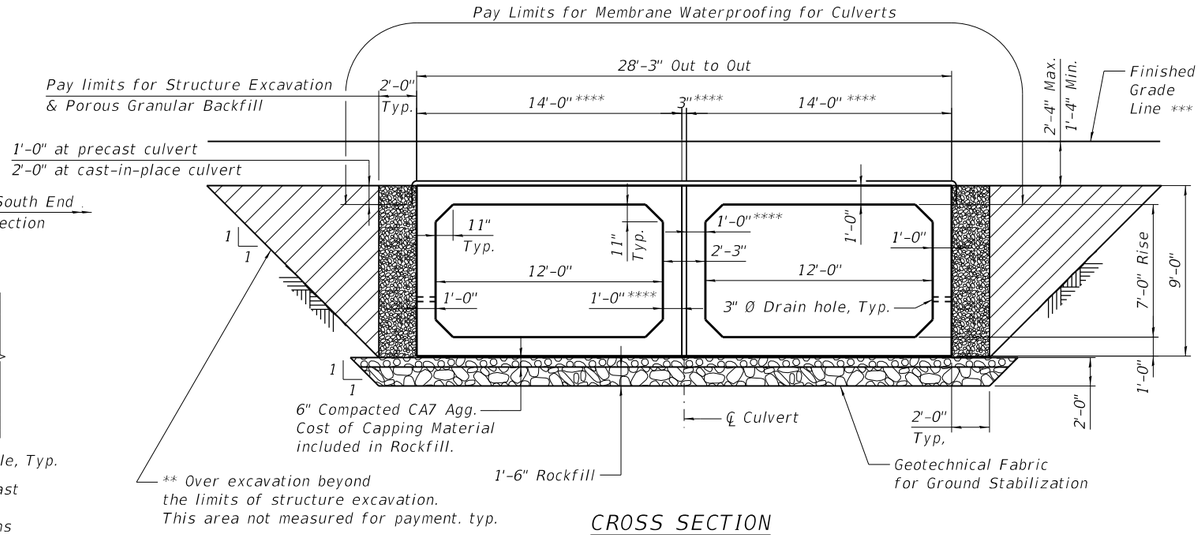
**** Applies to precast culvert



OPENING IN PRECAST CELL AT WALL "A"
Looking West



OPENING IN PRECAST CELL AT WALL "C"
Looking East



CROSS SECTION

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INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY

USER NAME =		DESIGNED - YMC	REVISED -	
		CHECKED -	REVISED -	
PLOT SCALE =		DRAWN - FD	REVISED -	
PLOT DATE =		CHECKED - KK	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY - GENERAL DATA AND CONSTRUCTION DETAILS - SILVER CREEK BOX CULVERT

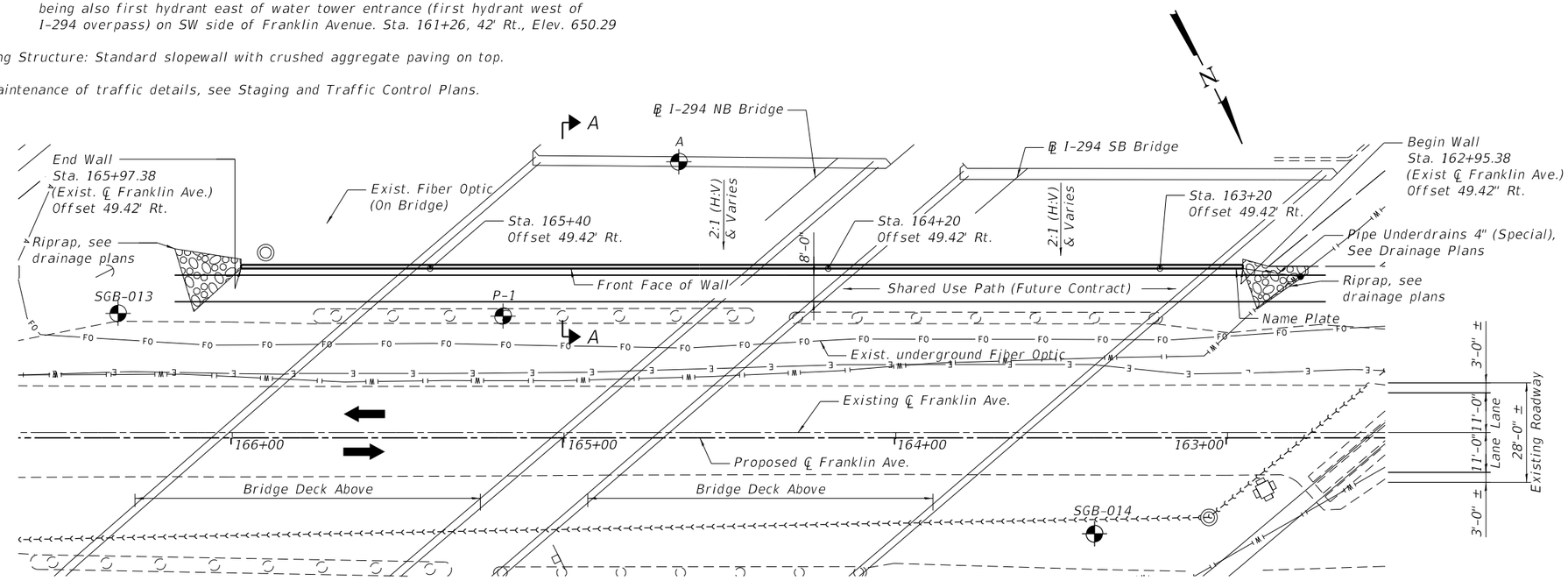
SHEET OF SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	273
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		

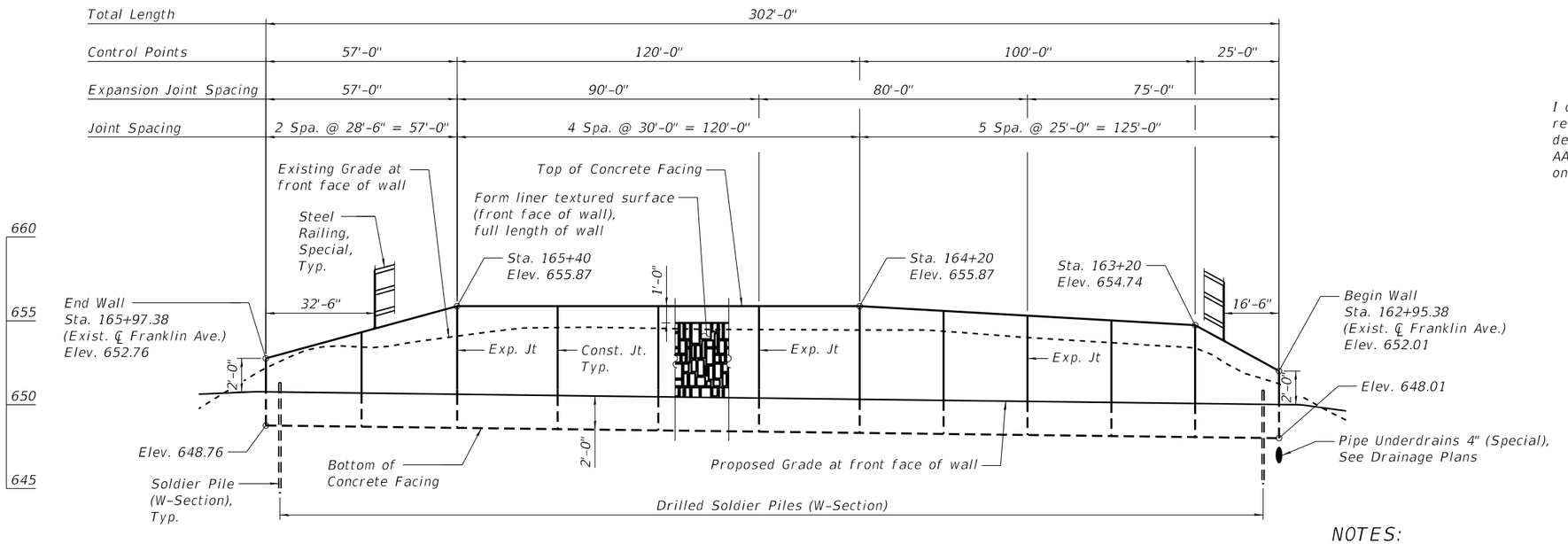
Benchmark: Cross cut on top of SSE bonnet bolt of second fire hydrant east of Silver Creek, being also first hydrant east of water tower entrance (first hydrant west of I-294 overpass) on SW side of Franklin Avenue. Sta. 161+26, 42' Rt., Elev. 650.29

Existing Structure: Standard slopewall with crushed aggregate paving on top.

For maintenance of traffic details, see Staging and Traffic Control Plans.



PLAN



ELEVATION

Looking South at Front Face of Wall

DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50, Soldier Pile)

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

STA. 162+95.38 TO 165+97.38
BUILT 202_ BY
VILLAGE OF FRANKLIN PARK
SEC. 17-00083-01-BR
F.A.U.RTE. 3533
STRUCTURE NO. _____

NAME PLATE

(Coordinate with Village of Franklin Park for Structure No., Plate Template and Lettering)

LEGEND

- E — Exist. Underground Electric
- FO — Exist. Underground Fiber Optic
- Exist. Underground Sanitary Sewer
- W — Exist. Underground Water Utility
- A — Exist. Aerial Lines
- Exist. ROW
- Pr. Drainage
- Catch Basin
- Soil Boring

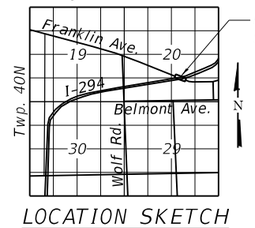
KAMLESH KUMAR
081-007216
CHICAGO
IL
STATE OF ILLINOIS
LICENSED STRUCTURAL ENGINEER

Expires

Signature

I certify that to the best of knowledge, information and belief, this retaining wall design is structurally adequate for the applicable design loading and complies with requirements of the current LRFD AASHTO Bridge Design Specifications. The design is an economical one for the type of structure.

Range 12E - 3rd. PM



LOCATION SKETCH

NOTES:

1. Offsets are measured from existing ℄ Franklin Ave. to front face of wall.

GENERAL PLAN AND ELEVATION
SOLDIER PILE WALL UNDER I-294
F.A.U. RTE. 3533 - SEC. 17-00083-01-BR
COOK COUNTY
STATION 162+95.38 TO 165+97.38
STRUCTURE NO. ---

exp U.S. Services Inc. Chicago, IL. BUILDINGS • EARTH & ENVIRONMENT • ENERGY INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FOR INFORMATION ONLY - GENERAL PLAN & ELEVATION SOLDIER PILE WALL UNDER I-294
		CHECKED -	REVISED -		
	PLOT SCALE =	DRAWN - EG	REVISED -		
	PLOT DATE =	CHECKED - CCE	REVISED -		SHEET OF SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	274
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

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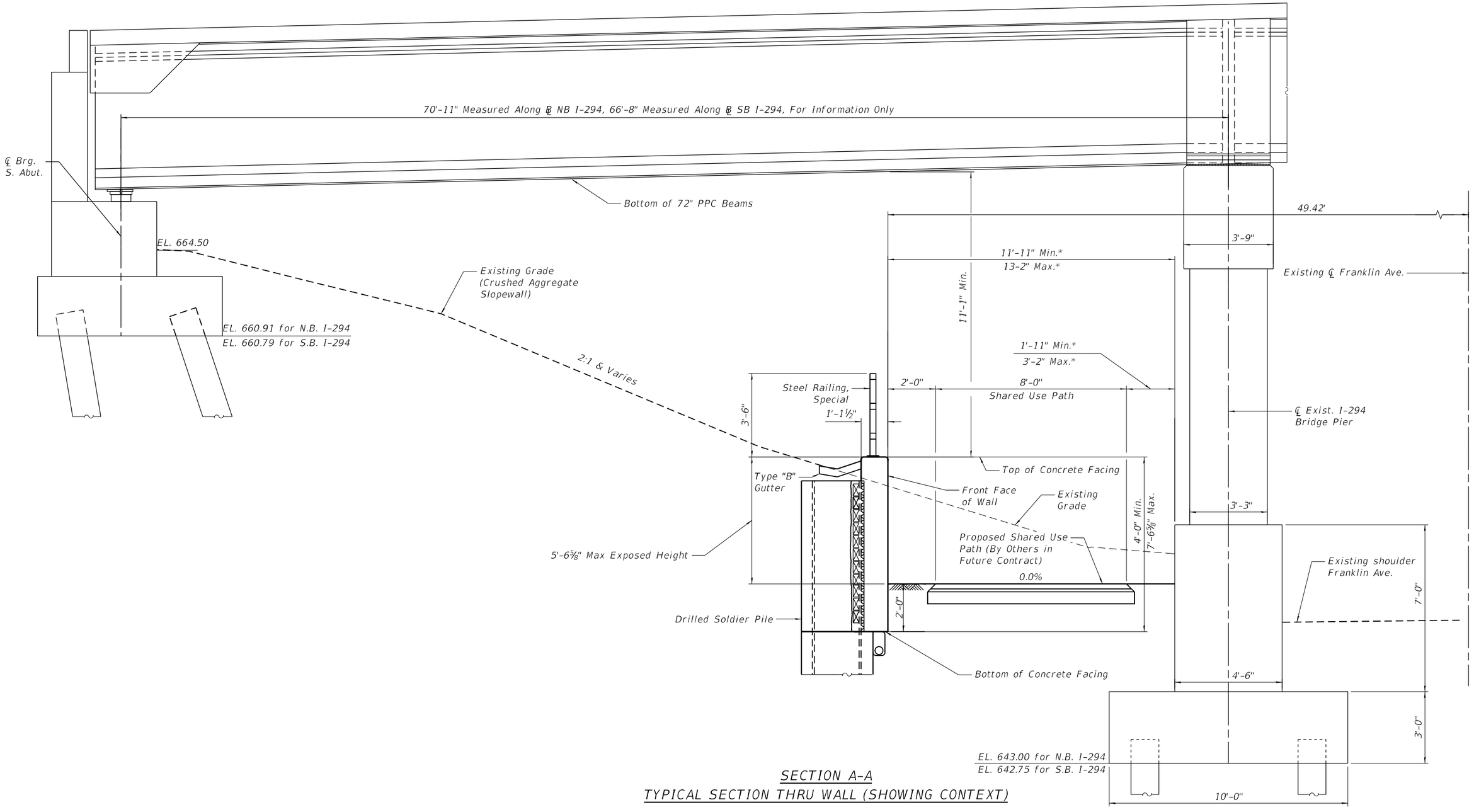

SECTION A-A
TYPICAL SECTION THRU WALL (SHOWING CONTEXT)

*Dimension measured perpendicular to front face of wall. For information only.

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USER NAME	=	DESIGNED	-	REVISED	-
		CHECKED	-	REVISED	-
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PLOT DATE	=	CHECKED	- CCE	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY - SECTION & DETAILS 1
SOLDIER PILE WALL UNDER I-294

SHEET OF SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	275
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		

CANADIAN PACIFIC BENSENVILLE YARD

FRANKLIN AVENUE IMPROVEMENT (BY OTHERS)

BEGIN FRANKLIN AVENUE IMPROVEMENT (FULL RECONSTRUCTION)

STA 114+00.00

℄ PR FRANKLIN AVE

SGB-001

SGB-003

COR-001

SGB-002

SGB-031

T.E.

EX ROW

PR SHARED USE PATH

℄ RUNGE STREET

℄ ACORN LANE

AIR BASE SERVICES, INC.

MIDWEST FOODS MANUFACTURING, INC.

ARLINGTON METALS CORP.

MATCH LINE STA. 117+00
SEE SHEET 277

0 50 100 150
SCALE IN FEET

IMPROVEMENT BY OTHERS | BEGIN FRANKLIN AVENUE IMPROVEMENT FULL RECONSTRUCTION

ACORN LANE STA. 105+44.11

RUNGE STREET STA. 112+38.10

STA. 114+00.00 656.39

EX GROUND ALONG PR ℄ FRANKLIN AVENUE

PR FRANKLIN AVENUE PGL

SGB-001 109+16 22.0' Left 657.9

SGB-002 112+04 14.9' Right 657.0

SGB-03 112+83 82.5' Right 655.4

SGB-003 115+16 23.9' Left 655.7

CRUSHED STONE
CLAY LOAM (FILL)
SANDY CLAY LOAM (FILL)
SILTY SAND & GRAVEL
CLAY LOAM
PAVEMENT
SILTY CLAY LOAM
SILTY CLAY
EOB

LEGEND

BORING NUMBER
STATION
OFFSET
ELEVATION

N-VALUE

SOIL STRENGTH (TSF) EOB
B-BULGE
S-SHEAR
P-POCKET PENETROMETER

MOISTURE CONTENT (%)
NR=NO RECOVERY

GROUNDWATER ELEVATION
▼ FIRST ENCOUNTER
▽ AT COMPLETION
▽ 24 HRS WATER LEVEL

EOB=END OF BORING

① 1.0'-2.5' SILTY CLAY LOAM (A-6) LL =35 PL = 17 PI = 18 G.I. =

SAMPLE INFORMATION
DEPTH
CLASSIFICATION
LL = LIQUID LIMIT
PL = PLASTIC LIMIT
PI = PLASTICITY INDEX
O.C. = ORGANIC CONTENT
G.I.=GROUP INDEX

102+00 103+00 103+00 104+00 104+00 105+00 105+00 106+00 107+00 108+00 109+00 110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00

PLAN: SURVEYED, PLOTTED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, CAD FILE NAME, NOTE BOOK, NO., BY, DATE

PROFILE: SURVEYED, PLOTTED, GRADES CHECKED, B.M. NOTED, STRUCTURE NO'S/MI'S CHKD, NOTE BOOK, NO., BY, DATE

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		DRAWN - RWC	REVISED -
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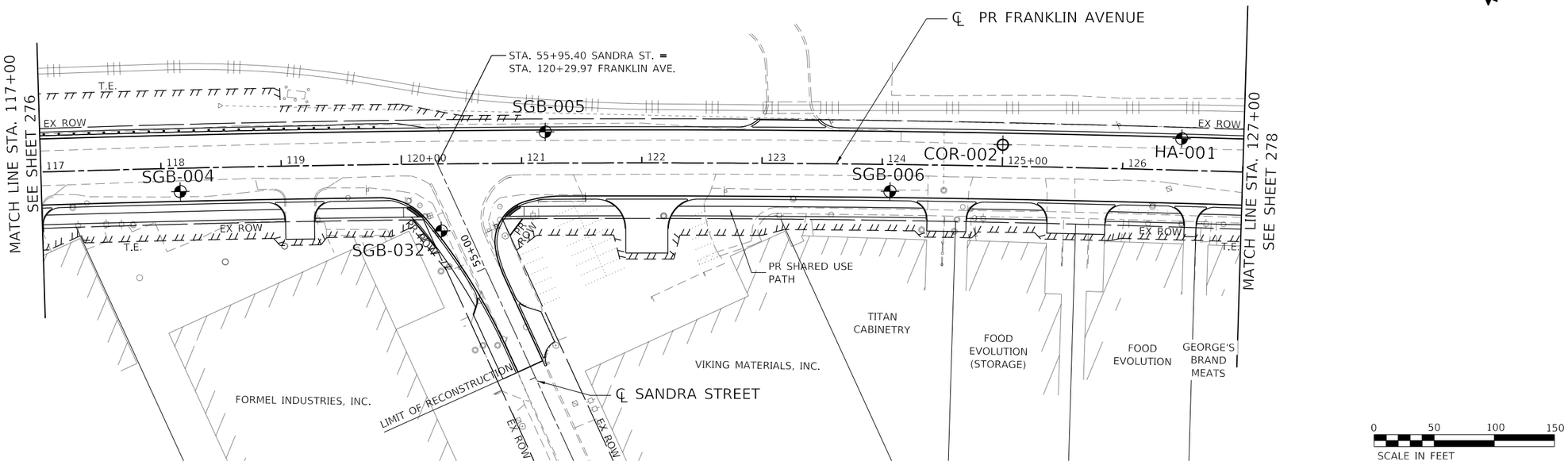
	PLOT DATE = 1/11/2022	DATE - 06/30/2021	REVISED -

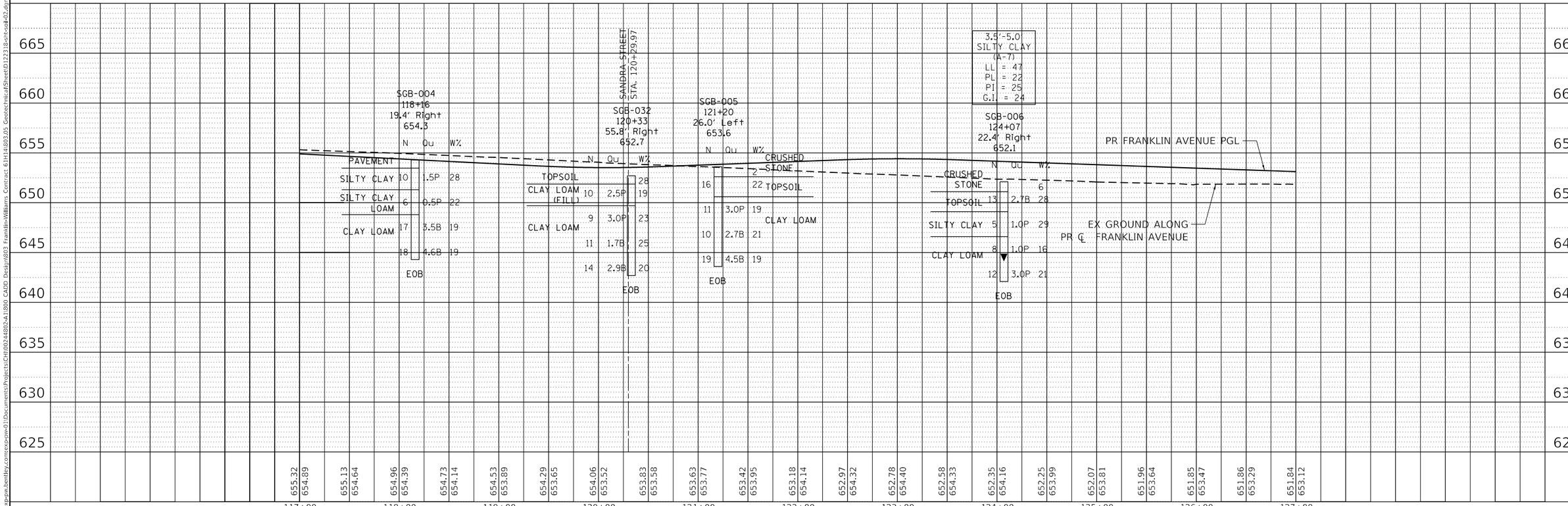
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY SOIL BORING PLAN & PROFILE
FRANKLIN AVENUE

SCALE: HORIZ. 1"=50' VERT. 1"=5' STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	276
		CONTRACT NO. 61H14		
		ILLINOIS FED. AID PROJECT		





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PROFILE — SURVEYED / PLOTTED / GRADES CHECKED / B.M. NOTED / STRUCTURE NOTATNS CHKD / NOTE BOOK / NO. / BY / DATE

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		DRAWN - RWC	REVISED -	
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	PLOT DATE = 1/11/2022	DATE - 06/30/2021	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY SOIL BORING PLAN & PROFILE
FRANKLIN AVENUE

SCALE: HORIZ. 1"=50' VERT. 1"=5' STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	277
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

CANADIAN PACIFIC BENSENVILLE YARD

℄ PR FRANKLIN AVENUE

STA. 608+97.20 WOLF RD. =
STA. 129+71.90 FRANKLIN AVE.

MATCH LINE STA. 127+00
SEE SHEET 277

MATCH LINE STA. 141+00
SEE SHEET 279

SGB-007 · HA-002 · CB-014A · CB-015 · CB-013 · CB-012 · CB-011A · CB-011 · CB-010 · CB-014 · HA-007 · HA-008 · COR-003 · SGB-008 · HA-009 · SGB-033 · HA-006

EX ROW · T.E. · LIMIT OF RECONSTRUCTION

127 · 128 · 129 · 130+00 · 131 · 132 · 133 · 134 · 135+00 · 136 · 137 · 138 · 139 · 140+00

GEORGE 'S BRAND MEAT · COVERED AFFAIRS, INC. · FELIPE NEWS · AMERICAN PRECISION MACHINING, INC. · CHICAGO JDM · ZOGALO FOODS · C & J METAL PRODUCTS, INC. · SHOW SAGE LLC · NOEL TRANSPORTATION CORP. · PR SHARED USE PATH

℄ WOLF ROAD

0 50 100 150
SCALE IN FEET

PROFILE

WOLF ROAD STA. 129+71.90

PR FRANKLIN AVENUE PGL

SGB-007 127+69 27.9' Left 651.9
EX GROUND ALONG PR ℄ FRANKLIN AVENUE
1 CRUSHED STONE
13 SILTY CLAY LOAM (FILL)
16 SILTY SAND & STONE (FILL)
19 CLAY LOAM
15 SILTY CLAY LOAM
EOB

SGB-033 130+48 71.2' Right 651.5
CRUSHED ASPHALT
CLAY LOAM (FILL) 12 7 8
SILTY CLAY LOAM 10 2.3P 21
13 23
CLAY 15 3.5P 26
EOB

CB-015 132+97 26.8' Left 651.1
PAVEMENT
SILTY CLAY 9 2.0P 27
5 2.0P 21
CLAY LOAM (FILL) 8 2.0P 20
15 1.9B 11
CLAY LOAM 13 3.5P 19
10 1.6B 21
13 2.5P 20
13 2.5P 19
10 2.5P 18
7 1.0P 21

CB-014 134+50 18.4' Left 651.3
PAVEMENT
SILTY CLAY 8 2.3P 27
SANDY CLAY LOAM 10 2.3P 15
15 2.5P 20
12 1.2B 20
CLAY LOAM 14 2.2B 20
10 2.3P 19
12 1.5P 20
13 1.7B 18
11 1.0B 21

CB-013 135+99 18.5' Left 650.4
PAVEMENT
TOPSOIL 13 3.3P 27
SANDY CLAY LOAM 14 1.0P 16
12 1.6B 15
CLAY LOAM 16 2.3B 18
12 1.6B 20
7 1.8B 16
SILT 17 19
12 1.1B 16
SILTY CLAY 9 1.2B 16
9 3.0P 16

CB-012 137+49 19.1' Left 649.2
PAVEMENT
TOPSOIL 13 3.3P 22
SILTY CLAY 8 1.1B 30
SANDY CLAY LOAM 3 0.8P 18
ST 1.0P 16
11 1.0P 21
CLAY LOAM 8 2.3P 15
7 2.3P 19
12 2.8P 19
9 2.0P 19

3.5'-5.0' LOAM (A-6)
LL = 38.0
PL = 20.0
PI = 18
G.I. = 7

CB-011 139+01 21.4' Left 647.9
PAVEMENT
CLAY LOAM (FILL) 11 3.5P 23
LOAM 7 2.0B 21
CLAY LOAM 13 4.2B 20
15 2.9B 20
10 1.5P 20
7 1.5P 13
EOB

CB-010 140+52 21.5' Left 647.7
PAVEMENT
CLAY LOAM (FILL) 12 4.0P 20
TOPSOIL 4 0.8P 38
ST 1.0P 17
6 1.0P 17
CLAY LOAM 14 2.8P 20
19 3.5P 19
13 2.3P 17
11 1.3P 19
SILTY LOAM 11 21

	127+00	128+00	129+00	130+00	131+00	132+00	133+00	134+00	135+00	136+00	137+00	138+00	139+00	140+00	141+00
665															665
660															660
655															655
650	651.84 653.12	651.81 652.94	651.81 652.77	651.81 652.60	651.80 652.53	651.78 652.62	651.84 652.82	651.80 653.02	651.76 653.23	651.94 653.43	652.12 653.57	652.13 653.55	652.14 653.37	652.10 653.13	650
645															645
640															640
635															635
630	652.06 652.89	651.85 652.65	651.62 652.41	651.26 652.17	650.89 651.93	650.51 651.68	650.13 651.44	649.74 651.20	649.33 650.96	648.97 650.73	648.62 650.61	648.44 650.64	648.27 650.78	648.26 650.94	630
625														648.23 651.09	625

FILE NAME = D122318-sht-soil-03.dgn	USER NAME = ZimonA	DESIGNED - AJP	REVISED -
Geo Services, Inc. Geotechnical, Environmental, Civil Engineering and Electrical Services An MBE - DBE Firm		DRAWN - RWC	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - DGT	REVISED -
	PLOT DATE = 1/11/2022	DATE - 06/30/2021	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY SOIL BORING PLAN & PROFILE
FRANKLIN AVENUE

SCALE: HORIZ. 1"=50' VERT. 1"=5' STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	278
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
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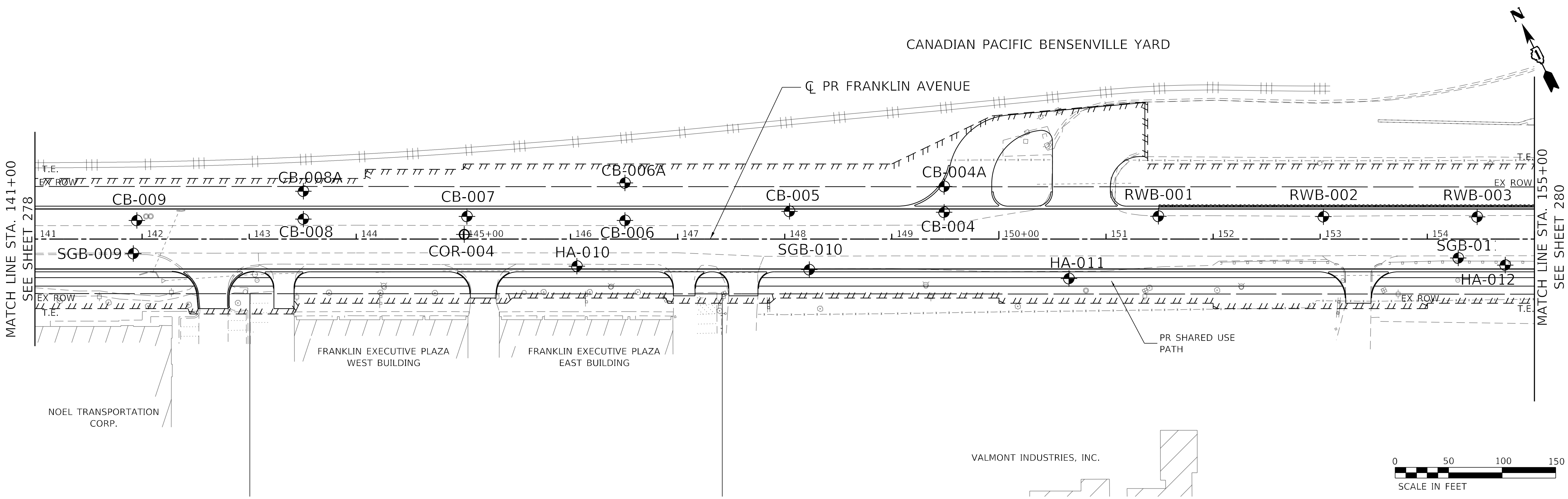

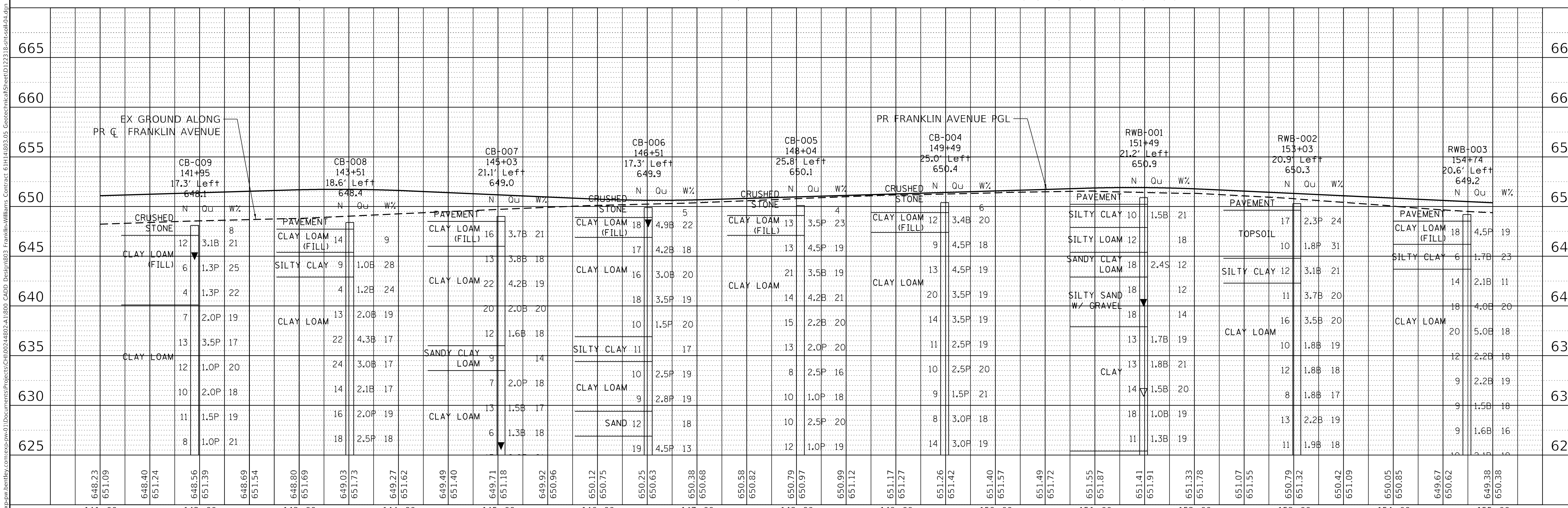

PLAN — SURVEYED / PLOTTED / ALIGNMENT CHECKED / RT. OF WAY CHECKED / CADD FILE NAME / NOTE BOOK / NO. / BY / DATE

PROFILE — SURVEYED / PLOTTED / GRADES CHECKED / B.M. NOTED / STRUCTURE NOTAT'NS CH'KD / NOTE BOOK / NO. / BY / DATE

MODEL: Default
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FILE NAME = D122318-sht-soil-04.dgn	USER NAME = ZimonA	DESIGNED - AJP	REVISED -
Geo Services, Inc. Geotechnical, Environmental, Civil Engineering and Electrical Services An MBE - DBE Firm	PLOT SCALE = 100.0000 ' / in.	DRAWN - RWC	REVISED -
	PLOT DATE = 1/11/2022	CHECKED - DGT	REVISED -
		DATE - 06/30/2021	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY SOIL BORING PLAN & PROFILE
FRANKLIN AVENUE

SCALE: HORIZ. 1"=50' VERT. 1"=5' STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	279

CONTRACT NO. 61H14

ILLINOIS FED. AID PROJECT

CANADIAN PACIFIC BENSENVILLE YARD

I-294 (ILLINOIS TOLLWAY)

MATCH LINE STA. 155+00
SEE SHEET 279

MATCH LINE STA. 169+00
SEE SHEET 281

T.E.

EX ROW

CB-001 CB-002 RWB-004 RWB-005 HA-003 COR-006

COR-005 SGB-014

CB-003 SGB-012 HA-013 SGB-013

155+00 156 157 158 159 160+00 161 162 163 164 165+00 166 167 168

DPB-001

℄ PR FRANKLIN AVENUE

SILVER CREEK

AJAX TOOL WORKS, INC.

I-294 (ILLINOIS TOLLWAY)

N

0 50 100 150
SCALE IN FEET

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CAUD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
B.M. NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY
DATE

I-294 TOLLWAY BRIDGE OVERPASS

RR CROSSING STA 162+52.38

RR CROSSING STA 167+64.11

SILVER CREEK CROSSING STA 156+61.66

11.0'-12.5' SANDY LOAM (A-2-4) %Gravel=39.8% Sand=29.2 %Silt+Clay=31.0 G.I.=0

CB-001 156+18 22.3' Left 647.4

RWB-004 157+44 22.7' Left 647.3

RWB-005 158+92 27.9' Left 647.1

SGB-012 160+27 20.3' Right 647.5

SGB-014 163+40 28.9' Left 647.8

SGB-013 166+34 37.5' Right 649.1

PR FRANKLIN AVENUE PGL

EX GROUND ALONG PR ℄ FRANKLIN AVENUE

EOB

	N	Qu	W%
SANDY TOPSOIL	7	1.3P	19
SILTY CLAY (FILL)	7	1.2B	27
ORGANIC SILTY CLAY	4	0.6B	40
SANDY LOAM	2	0.5B	34
CLAY	ST		18
	11	1.3P	18
	12	1.5B	20
	13	1.5B	23
	12		20

	N	Qu	W%
SAND & GRAVEL	10	3.0P	21
SILTY CLAY (FILL)	7	1.3P	28
	5	0.7B	32
	5	0.8B	29
CLAYEY SAND & GRAVEL	16		12
	14	2.0B	19
CLAY LOAM	15	2.2B	20
	14	2.2B	20

	N	Qu	W%
SAND & GRAVEL	23	4.5P	10
CLAY LOAM (FILL)	8	2.5P	40
TOPSOIL	5	1.3B	29
SILTY CLAY	5	1.3B	25
	15	2.5B	19
CLAY LOAM	16	2.2B	18
	10	1.6B	22
	17		20

	N	Qu	W%
GRAVEL & STONE	19	4.5P	4
SILTY CLAY LOAM (FILL)	19	4.5P	5
TOPSOIL	7	1.5P	17
CLAY LOAM	12	3.8B	39
	20	2.7B	20

	N	Qu	W%
GRAVEL & STONE	28		11
CLAY LOAM (FILL)	13		10
	6		15
SILTY CLAY	6	1.4B	13
			28

	N	Qu	W%
PAVEMENT			
SILTY CLAY (FILL)	9	1.5B	23
	6	1.2B	23
SILTY LOAM	4		19
CLAY LOAM	12	2.5P	20

649.38 650.38 | 649.27 650.15 | 649.31 649.91 | 649.33 649.68 | 649.13 649.45 | 648.70 649.21 | 648.22 648.98 | 647.93 648.74 | 647.88 648.51 | 647.97 648.28 | 648.07 648.04 | 648.18 647.84 | 648.30 647.78 | 648.32 647.88 | 648.33 648.04 | 648.42 648.29 | 648.51 648.57 | 648.68 648.71 | 648.82 648.85 | 648.92 648.99 | 648.97 649.13 | 649.05 649.26 | 649.15 649.40 | 649.31 649.54 | 649.43 649.68 | 649.70 649.78 | 649.75 649.79 | 649.61 650.03 | 649.47 650.27

155+00 156+00 157+00 158+00 159+00 160+00 161+00 162+00 163+00 164+00 165+00 166+00 167+00 168+00 169+00

665 660 655 650 645 640 635 630 625

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		DRAWN - RWC	REVISED -	
Geo Services, Inc. Geotechnical, Environmental, Civil Engineering and Electrical Services An MBE - DBE Firm	PLOT SCALE = 100.0000 ' / in.	CHECKED - DGT	REVISED -	
	PLOT DATE = 1/11/2022	DATE - 06/30/2021	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY SOIL BORING PLAN & PROFILE
FRANKLIN AVENUE

SCALE: HORIZ. 1"=50' VERT. 1"=5' STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	280
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

CANADIAN PACIFIC BENSENVILLE YARD

℄ PR FRANKLIN AVENUE

MATCH LINE STA. 169+00
SEE SHEET 280

MATCH LINE STA. 179+00
SEE SHEET 282

N

SGB-016
SGB-015
HA-004
SGB-018
COR-007
HA-005
SGB-017

T.E.
EX ROW

BRIDGE DEVELOPMENT PARTNERS, LLC

0 50 100 150
SCALE IN FEET

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CAUD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
PROFILES CHECKED
B.M. NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.

3.5'-5.0'
CLAY
(A-7)
LL = 44
PL = 19
PI = 25
C.I. = 24

SGB-016
169+45
26.2' Left
648.3

SGB-015
172+26
29.0' Right
651.7

SGB-018
175+27
11.8' Left
650.6

SGB-017
178+31
25.6' Right
650.3

EX GROUND ALONG PR ℄ FRANKLIN AVENUE

PR FRANKLIN AVENUE PGL

	N	Qu	W%
GRAVEL & STONE			9
CLAY LOAM (FILL)	11		24
CLAY	17	2.8B	22
CLAY LOAM	419	4.5P	19
	18	5.0B	19
EOB			

	N	Qu	W%
PAVEMENT			
CRUSHED STONE	14	4.5P	15
CLAY LOAM (FILL)	15	2.3B	22
SILTY CLAY	5	2.5P	24
CLAY LOAM	11	2.1B	21
EOB			

	N	Qu	W%
PAVEMENT			
CRUSHED STONE	10		6
CLAY LOAM (FILL)	6	1.5P	30
	4	1.5P	31
CLAY LOAM	6	1.2B	23
EOB			

	N	Qu	W%
PAVEMENT			
CRUSHED STONE	18		6
	3		10
CLAY LOAM	16	2.6B	19
	18	5.8B	20
EOB			

665 660 655 650 645 640 635 630 625

649.47 650.27 | 649.55 650.51 | 649.53 650.75 | 649.62 650.94 | 649.73 650.97 | 649.86 650.84 | 649.81 650.66 | 650.03 650.48 | 650.23 650.30 | 650.36 650.16 | 650.57 650.19 | 650.75 650.39 | 651.01 650.63 | 651.00 650.87 | 650.99 651.11 | 650.77 651.35 | 650.56 651.59 | 650.45 651.83 | 650.37 652.07 | 650.47 652.23 | 650.60 652.25

169+00 170+00 171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00 179+00

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FILE NAME = D122318-sht-soil-06.dgn	USER NAME = ZimonA	DESIGNED - AJP	REVISED -
		DRAWN - RWC	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - DGT	REVISED -
	PLOT DATE = 1/11/2022	DATE - 06/30/2021	REVISED -

Geo Services, Inc.
Geotechnical, Environmental, Civil Engineering and Electrical Services
An MBE - DBE Firm

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY SOIL BORING PLAN & PROFILE
FRANKLIN AVENUE

SCALE: HORIZ. 1"=50' VERT. 1"=5' STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	281
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CAUD FILE NAME
NOTE BOOK
NO.
BY
DATE

CANADIAN PACIFIC BENSENVILLE YARD

℄ PR FRANKLIN AVENUE

MATCH LINE STA. 179+00
SEE SHEET 281

MATCH LINE STA. 712+00
SEE SHEET 283

EX ROW
T.E.
SGB-020
HA-014
SGB-019
COR-008
℄ WILLIAMS DRIVE
BONSAL AMERICAN, INC.
MANNHEIM ROAD
TRIPOLS LTD.
LIMIT OF RE-CONSTRUCTION
℄ FRANKLIN AVENUE
VINTAGE AUTO BODY WORKS INC.
INDLAB, INC.
CHICAGOLAND METAL FABRICATORS & SUPPLY, INC.
N
0 50 100 150
SCALE IN FEET

PROFILE
SURVEYED
PLOTTED
CHECKED
NOTE BOOK
NO.
BY
DATE

WILLIAMS DRIVE STA. 183+14.84

SGB-020
181+60
14.4' Left
651.0
N Qu W%
PAVEMENT
TOPSOIL 8 2.0P 26
7 1.0P 29
CLAY LOAM
8 1.5P 25
SILTY CLAY LOAM 10 25
EOB

1.0'-2.5'
CLAY LOAM
(A-6)
LL = 27
PL = 14
PI = 13
C.I. = 5

SGB-019
184+42
31.8' Right
647.2
N Qu W%
PAVEMENT
CLAY LOAM (FILL) 21 3.5P 17
17 3.5P 15
CLAY LOAM
18 2.1B 20
18 3.0B 20
EOB

PR FRANKLIN AVENUE PGL
EX GROUND ALONG PR ℄ FRANKLIN AVENUE
MANNHEIM ROAD BRIDGE OVERPASS
END IMPROVEMENT
STA. 190+00.00
EL. 646.05
LINCOLN STREET
STA. 191+03.48

660 655 650 645 640 635 630 625 620

179+00	180+00	181+00	182+00	183+00	184+00	185+00	186+00	187+00	188+00	189+00	190+00	191+00	192+00
650.60 652.25	650.74 652.11	650.91 651.83	651.00 651.47	651.00 651.11	650.93 650.74	650.57 650.26	649.75 649.60	648.61 648.83	647.70 648.05	647.07 647.27	646.52 646.65	646.12 646.26	645.87 646.02	645.70 645.79	645.52 645.56	645.35 645.32	645.19 645.10	645.03 645.01	645.14 645.07	645.26 645.29	645.65 645.66	646.05 646.05	646.41	646.73	646.80	646.72

Geo Services, Inc.
Geotechnical, Environmental, Civil Engineering and Electrical Services
An MBE - DBE Firm

FILE NAME = D122318-sht-soil-07.dgn	USER NAME = ZimonA	DESIGNED - AJP	REVISED -
		DRAWN - RWC	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - DGT	REVISED -
	PLOT DATE = 1/11/2022	DATE - 06/30/2021	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY SOIL BORING PLAN & PROFILE
FRANKLIN AVENUE

SCALE: HORIZ. 1"=50' VERT. 1"=5' STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	282
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

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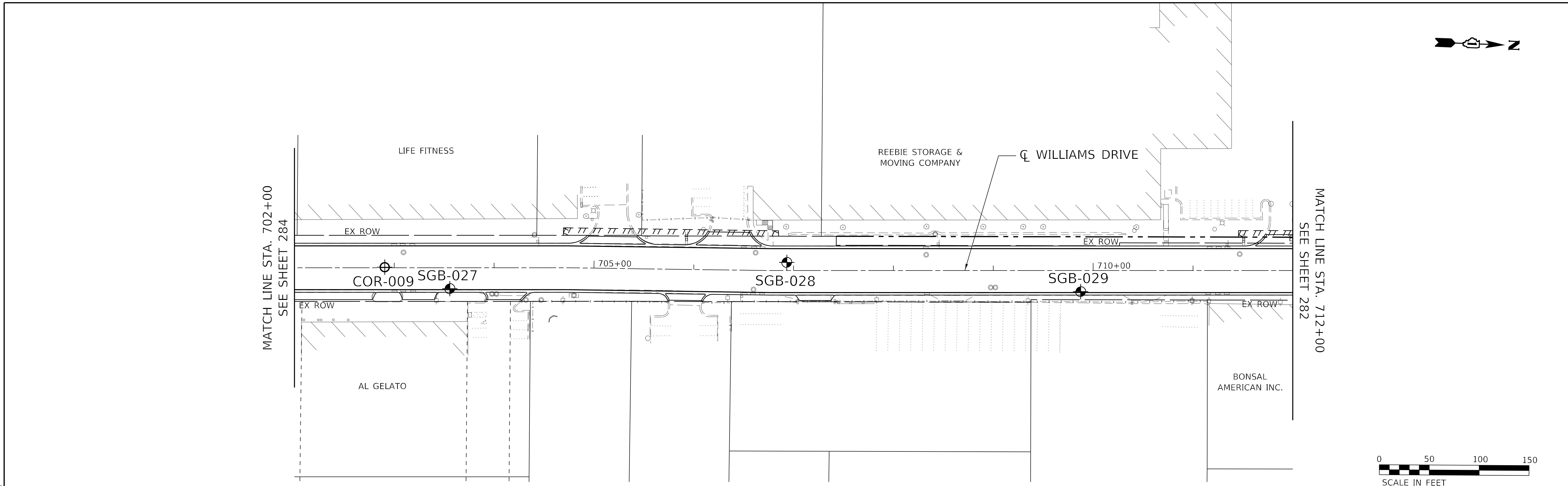

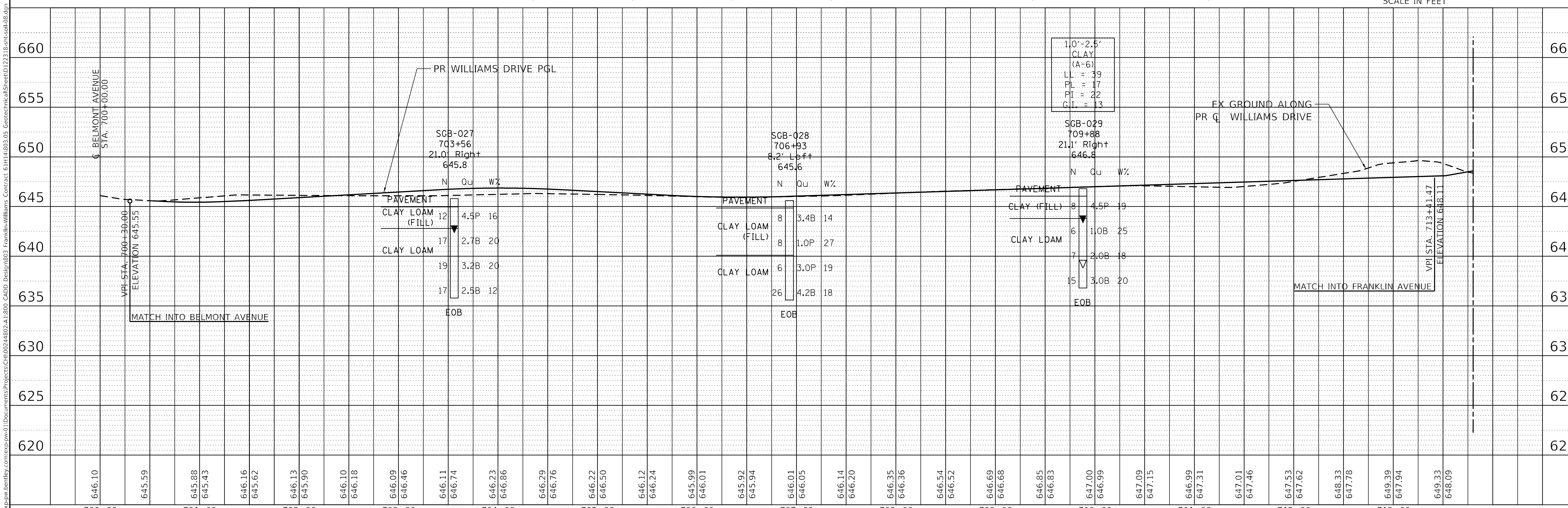

FILE NAME = D122318-sht-soil-08.dgn	USER NAME = ZimonA	DESIGNED - AJP	REVISED -
Geo Services, Inc.		DRAWN - RWC	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - DGT	REVISED -
	PLOT DATE = 1/11/2022	DATE - 06/30/2021	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY SOIL BORING PLAN & PROFILE
WILLIAMS DRIVE

SCALE: HORIZ. 1"=50' VERT. 1"=5' STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	283

CONTRACT NO. 61H14

ILLINOIS FED. AID PROJECT

MATCH LINE STA. 702+00, SEE SHEET 283

℄ BELMONT AVENUE

LIMIT OF RECONSTRUCTION

℄ WILLIAMS DRIVE

EX ROW

PR ROW

SGB-025

SGB-024

SGB-022

RINGSPANN CORP.

STA. 402+ 92.09 BELMONT AVE. =
STA. 700+00.00 WILLIAMS DR.

AJAX TOOLS
10530 ANDERSON PL.

℄ MANNHEIM ROAD

N

0 50 100 150
SCALE IN FEET

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CAD'D FILE NAME
NOTE BOOK
NO.
DATE
BY

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
B.M. NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
DATE
BY

MATCH INTO EXISTING
STA. 398+60.82

646.71

PR BELMONT AVENUE PGL

SGB-025
400+03
9.4' Left
647.1

N Qu W%
PAVEMENT 7 2.5P 22
SANDY CLAY LOAM 7 1.0P 18
CLAY LOAM 19 4.0P 20
17 3.4B 16
EOB

WILLIAMS DR
STA. 402+34.45

1.0-2.5'
SANDY LOAM
(A-6)
LL = 29
PL = 16
PI = 13
G.I. = 3

SGB-024
403+54
22.7' Right
645.3

N Qu W%
TOPSOIL 20
SANDY LOAM (FILL) 8 3.5P 15
CLAY LOAM (FILL) 3 1.3P 19
GRAVEL (FILL) 3 13
4 11
EOB

MATCH INTO MANNHEIM ROAD
STA. 406+88.00

SGB-022
406+39
21.5' Left
644.5

N Qu W%
TOPSOIL 3.5P 29
SILTY CLAY 5 1.1B 32
2 2.2B 20
CLAY LOAM 16 3.3B 19
2 2.2B 20
EOB

645.11

MANNHEIM RD
STA. 407+30.00

EX GROUND ALONG
EX ℄ BELMONT AVENUE

660 655 650 645 640 635 630 625 620

646.45 646.60 646.61 646.61 646.65 646.70 646.80 646.87 647.04 647.07 647.28 647.27 647.29 647.41 647.25 647.40 647.06 647.22 646.84 646.89 646.46 646.50 646.06 646.11 645.70 645.72 645.30 645.33 644.96 644.94 644.66 644.57 644.58 644.41 644.54 644.47 644.78 644.75 645.29 645.41 645.10 645.02 644.86 644.39 644.02

396+00 397+00 398+00 399+00 400+00 401+00 402+00 403+00 404+00 405+00 406+00 407+00 408+00 409+00 410

FILE NAME = D122318-sht-soil-09.dgn	USER NAME = ZimonA	DESIGNED - AJP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ROADWAY SOIL BORING PLAN & PROFILE BELMONT AVENUE
Geo Services, Inc. Geotechnical, Environmental, Civil Engineering and Electrical Services An MBE - DBE Firm	PLOT SCALE = 100.0000 ' / in.	DRAWN - RWC	REVISED -		SCALE: HORIZ. 1"=50' VERT. 1"=5' STA. TO STA.
	PLOT DATE = 1/11/2022	CHECKED - DGT	REVISED -		
		DATE - 06/30/2021	REVISED -		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	284
		CONTRACT NO. 61H14		
		ILLINOIS FED. AID PROJECT		

MODEL: Default
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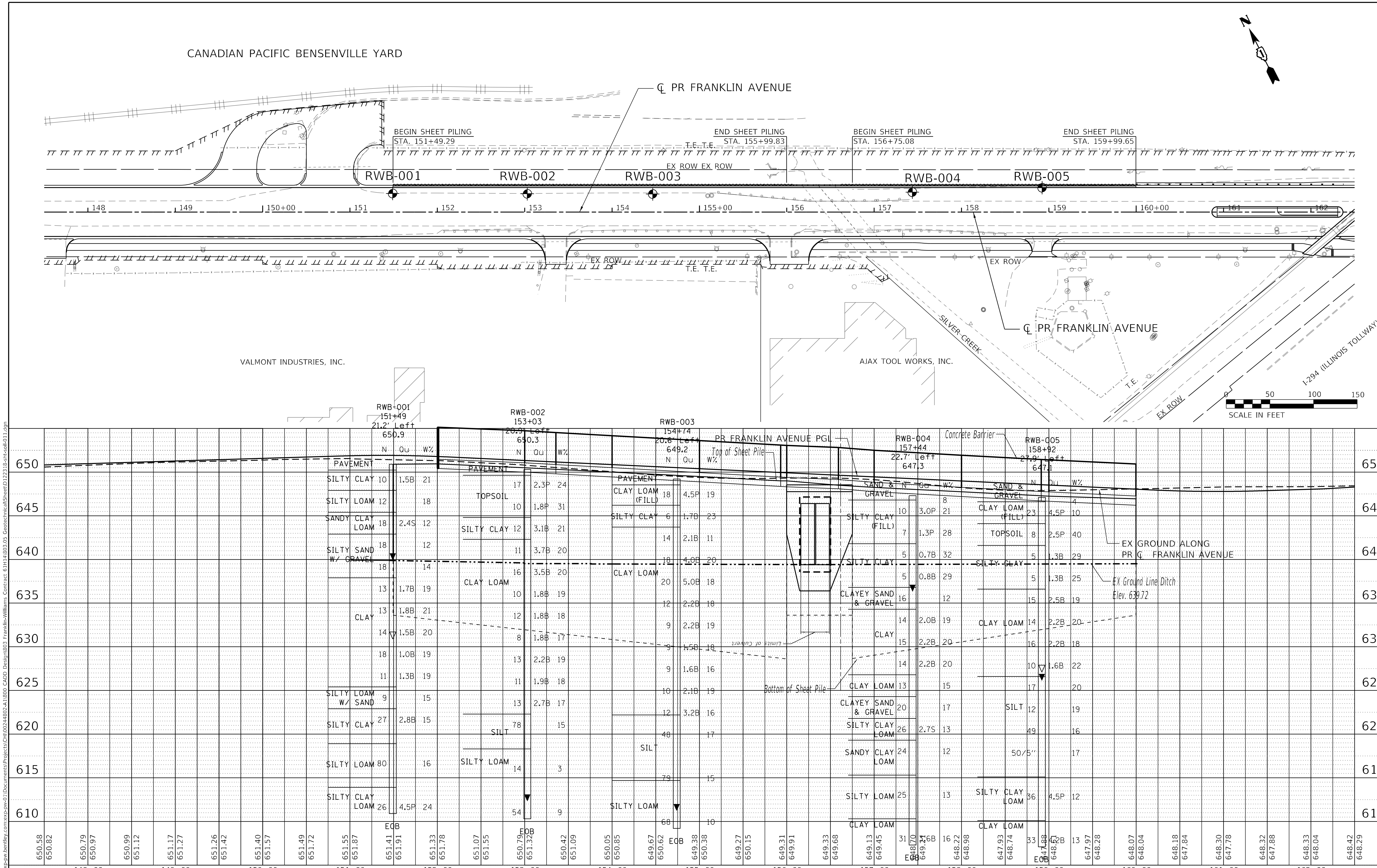

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Geo Services, Inc.	PLOT SCALE = 100.0000 ' / in.	DRAWN - RWC	REVISED -
	PLOT DATE = 1/11/2022	CHECKED - DGT	REVISED -
		DATE - 06/30/2021	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING PLAN & PROFILE
SHEET PILING WALL ALONG FRANKLIN AVENUE

SCALE: HORIZ. 1"=50' VERT. 1"=5' STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	285
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-2838

PAVEMENT CORE SUMMARY

Project: Franklin Avenue Reconstruction — GSI Job No.: 19083
Location: Franklin Avenue from Acorn Lane to Mannheim Road, Franklin Park, Illinois — Date: 11/20/2019
County: Cook — Cored By: TZ
Client: EXP — Checked By: AJP

CORE NO.	THICKNESS (in.)	MATERIAL DESCRIPTION
COR-001		Northing: 1923462.4 Easting: 1099491.9
	1.75	ASPHALT-slightly porous, fine to medium coarse aggregate.
	3.5	ASPHALT-fractuered @ base, fine to medium coarse aggregate.
	4.0	ASPHALT-well consolidated, fine to medium coarse aggregate.
	2.5	ASPHALT-slightly porous, fine to medium coarse aggregate.
	3.75	ASPHALT-slightly porous, fine to medium coarse aggregate.
	8.5+	SILTY CLAY-dark brown & black
COR-002		Northing: 1923096.5 Easting: 1100421.1
	2.25	ASPHALT-slightly porous, fine to medium coarse aggregate.
	2.5	ASPHALT-well consolidated, fine to medium coarse aggregate.
	4.25	ASPHALT-well consolidated, fine to medium coarse aggregate.
	2.0	ASPHALT-well consolidated, fine to medium coarse aggregate.
	4.5	ASPHALT-well consolidated, fine to medium coarse aggregate.
	8.5+	TOPSOIL-black
COR-003		Northing: 1922653.1 Easting: 1101317.4
	2.5	ASPHALT-well consolidated, fine to medium coarse aggregate.
	2.0	ASPHALT-well consolidated, fine to medium coarse aggregate.
	10.0	PCC-well consolidated
	4.0	CRUSHED STONE
	5.5+	SILTY CLAY-brown
COR-004		Northing: 1922208.7 Easting: 1102214.8
	1.75	ASPHALT-slightly porous, fine to medium coarse aggregate.
	2.0	ASPHALT-slightly porous, fine to medium coarse aggregate.
	9.5	PCC-well consolidated
	4.0	CRUSHED STONE
	6.75+	SILTY CLAY-dark brown to black
COR-005		Northing: 1921751.7 Easting: 1103109.1
	1.25	ASPHALT-well consolidated, fine to medium coarse aggregate.
	2.75	ASPHALT-well consolidated, fine to medium coarse aggregate.
	4.0	ASPHALT-well consolidated, fine to medium coarse aggregate.
	16.0+	CLAYEY SAND & GRAVEL-dark gray to black
COR-006		Northing: 1921318.2 Easting: 1104036.9
	2.25	ASPHALT-slightly porous, fine to medium coarse aggregate.
	2.0	ASPHALT-well consolidated, fine to medium coarse aggregate.
	2.0	ASPHALT-well consolidated, fine to medium coarse aggregate.
	1.75	ASPHALT-slightly porous, fine to medium coarse aggregate.
	3.0	CRUSHED STONE
	13.0+	SILTY CLAY-dark gray to black
COR-007		Northing: 1921054.0 Easting: 1104957.8 AJP
	2.25	ASPHALT-well consolidated, fine to medium coarse aggregate.
	2.0	ASPHALT-well consolidated, fine to medium coarse aggregate.
	10.25	PCC-well consolidated, 1/4" wire mesh @ -4.25" & -6.25".
	8.0	CRUSHED STONE
	1.5+	SILTY CLAY-dark brown & black
COR-008		Northing: 1921157.4 Easting: 1105948.0
	10.75	PCC-well consolidated, 1/4" wire mesh @ -4.0".
	3.0	CRUSHED STONE
	10.25+	SILTY CLAY-dark brown & black

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-2838

PAVEMENT CORE SUMMARY

Project: Franklin Avenue Reconstruction — GSI Job No.: 19083
Location: Franklin Avenue from Acorn Lane to Mannheim Road, Franklin Park, Illinois — Date: 11/20/2019
County: Cook — Cored By: TZ
Client: EXP — Checked By: AJP

CORE NO.	THICKNESS (in.)	MATERIAL DESCRIPTION
COR-009		Northing: 1920008.2 Easting: 1105802.1
	9.5	PCC-well consolidated, 1/4" wire mesh @ -3.25".
	14.5+	CRUSHED STONE
COR-010		Northing: 1919735.5 Easting: 1106025.3
	10.0	PCC-well consolidated, 1/4" wire mesh @ -5.0".
	3.0	CRUSHED STONE
	11.0+	SILTY CLAY-black

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		DRAWN - RWC	REVISED -
Geo Services, Inc. Geotechnical, Environmental, Civil Engineering and Electrical Services An MBE - DBE Firm	PLOT SCALE = 100.0000 ' / in.	CHECKED - DGT	REVISED -
	PLOT DATE = 1/11/2022	DATE - 06/20/2021	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT CORES

SCALE: | SHEET SCV05EEOF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	286
		CONTRACT NO. 61H14		
		ILLINOIS	FED. AID PROJECT	

SIGN DETAIL
1:20

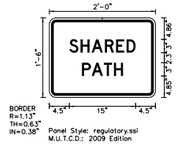
SIGN NUMBER	CUSTOM
WIDTH x HGHT.	1'-6" x 2'-0"
BORDER WIDTH	0.63"
CORNER RADIUS	1.13"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Panel Style: regulatory.ssi
Dimensions are in inches.tenths
Letter widths are shown

LETTER POSITIONS (X)																				LENGTH	SERIES-SIZE
W	A	L	K																		D 2000
2.7	2.5	1.9	2.1																	10.3	3
Y	O	U	R																		D 2000
2.6	2.1	2	2																	10.6	3
B	I	K	E																		D 2000
2	0.5	2.1	1.9																	8.2	3

SIGN DETAIL
1:20



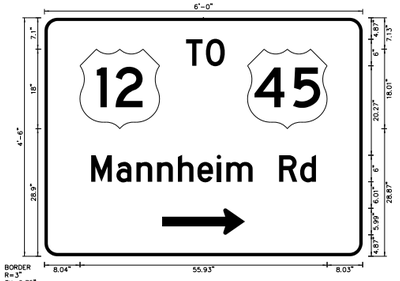
SIGN NUMBER	CUSTOM
WIDTH x HGHT.	2'-0" x 1'-6"
BORDER WIDTH	0.63"
CORNER RADIUS	1.13"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Panel Style: regulatory.ssi
Dimensions are in inches.tenths
Letter widths are shown

LETTER POSITIONS (X)																				LENGTH	SERIES-SIZE
S	H	A	R	E	D																D 2000
2	2	2.5	2	1.9	2															15	3
P	A	T	H																		D 2000
2	2.5	1.9	2																	9.3	3

SIGN DETAIL
1:20



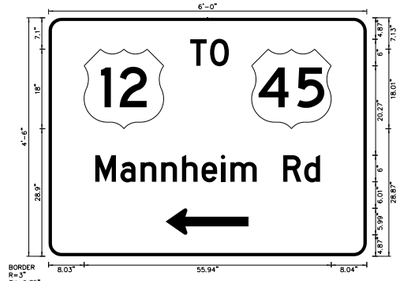
SIGN NUMBER	CUSTOM
WIDTH x HGHT.	6'-0" x 4'-6"
BORDER WIDTH	0.75"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
M1_4	0	8	28.9	18	18
M1_4	0	46	28.9	18	18
AR_THRU	270	26.6	4.9	6	18.8

Panel Style: guide_con_street.ssi
Dimensions are in inches.tenths
Letter widths are shown

LETTER POSITIONS (X)																				LENGTH	SERIES-SIZE
T	O																				D 2000
3.7	4.3																			8.8	6
M	a	n	n	h	e	i	m		R	d											D 2000
4.7	3.4	3.5	3.5	3.5	3.5	1	5.9		4.1	3.6										50.9	6/4.5

SIGN DETAIL
1:20



SIGN NUMBER	CUSTOM
WIDTH x HGHT.	6'-0" x 4'-6"
BORDER WIDTH	0.75"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
M1_4	0	8	28.9	18	18
M1_4	0	46	28.9	18	18
AR_THRU	90	26.6	4.9	6	18.8

Panel Style: guide_con_street.ssi
Dimensions are in inches.tenths
Letter widths are shown

LETTER POSITIONS (X)																				LENGTH	SERIES-SIZE
T	O																				D 2000
3.7	4.3																			8.8	6
M	a	n	n	h	e	i	m		R	d											D 2000
4.7	3.4	3.5	3.5	3.5	3.5	1	5.9		4.1	3.6										50.9	6/4.5

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	PLOT DATE = 1/11/2022	DATE - 1/12/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING PLANS
FRANKLIN AVENUE

SCALE: 1"=35' | SHEET SCV06A OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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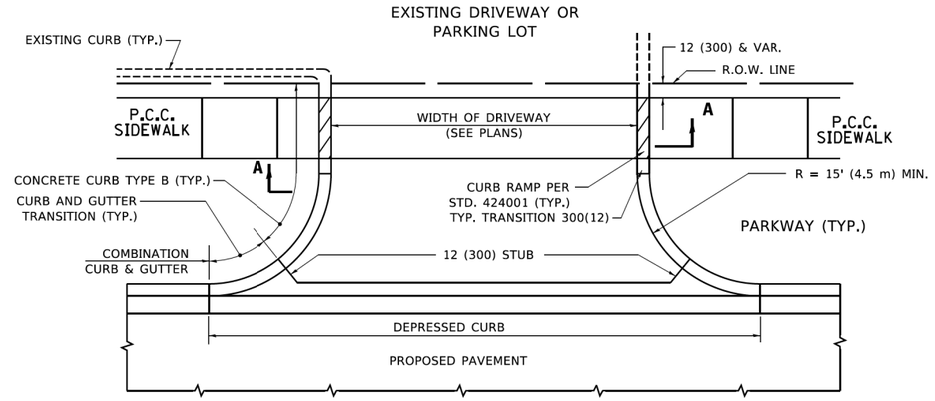
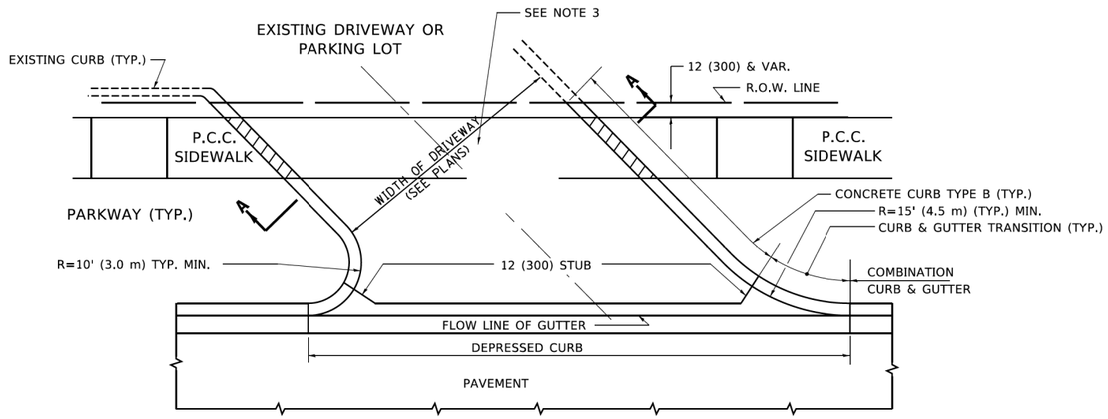
		CONTRACT NO. 61H14		
	ILLINOIS	FED. AID PROJECT		



WITH CONCRETE CURB, TYPE B



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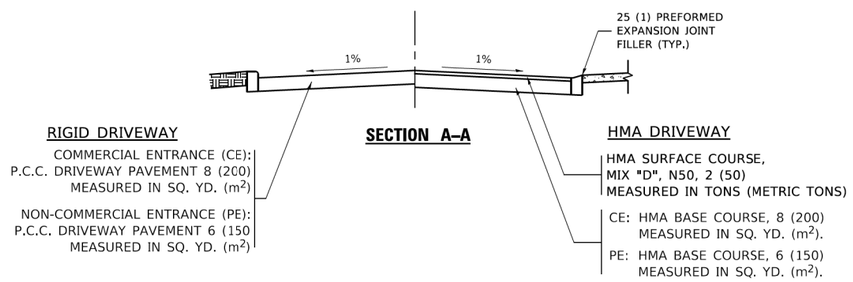
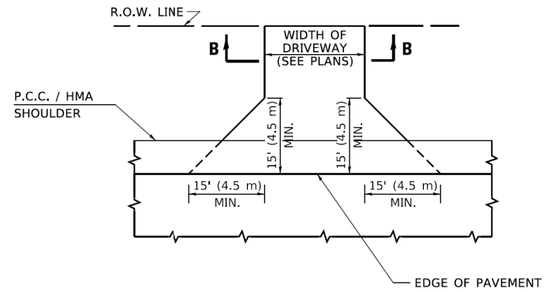
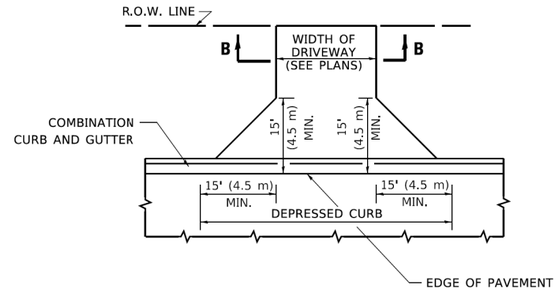
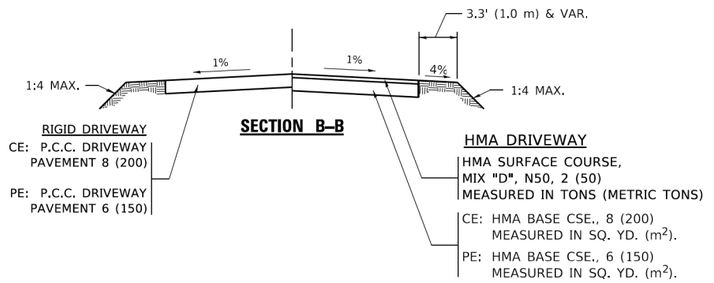




ADJACENT TO P.C.C./HMA SHOULDER



ADJACENT TO CURB AND GUTTER



GENERAL NOTES:

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.
1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.
WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

RURAL FIELD ENTRANCE (FE)

HMA SURFACE COURSE,
MIX "D", N50, 2 (50)
MEASURED IN TONS (METRIC TONS)

AGGREGATE BASE CSE., TYPE B, 8 (200)
MEASURED IN SQ. YD. (m^2).

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	DRAWN -	REVISED - R. BORO 01-01-07	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - R. BORO 06-11-08	
PLOT DATE = 3/27/2019	DATE - 11-04-95	REVISED - R. BORO 09-06-11	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS – DISTANCE BETWEEN R.O.W. AND FACE OF CURB & EDGE OF SHOULDER ≥15'(4.5m)

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	288
	BD400–01 (BD–01)	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

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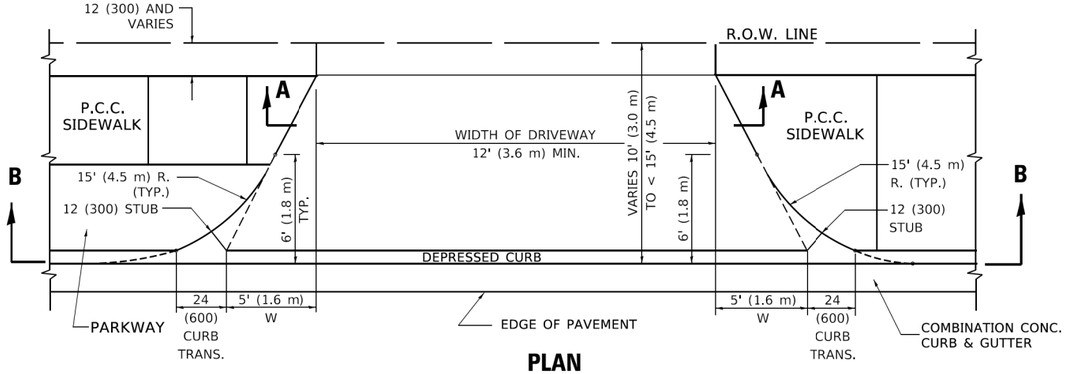
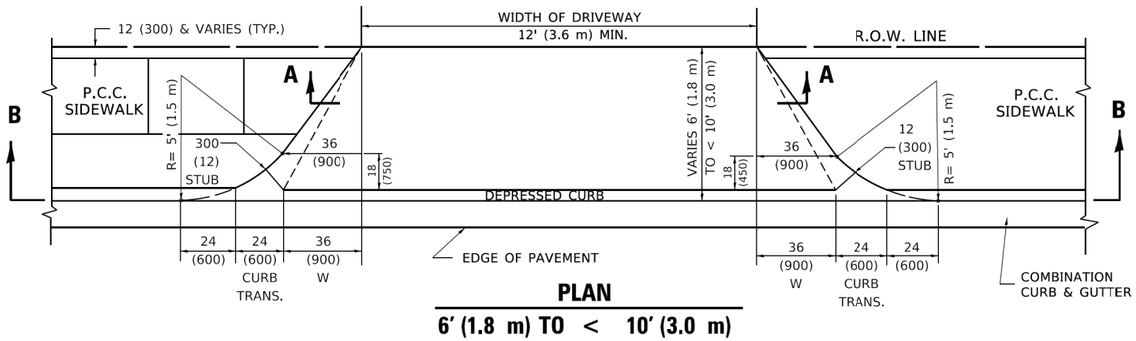
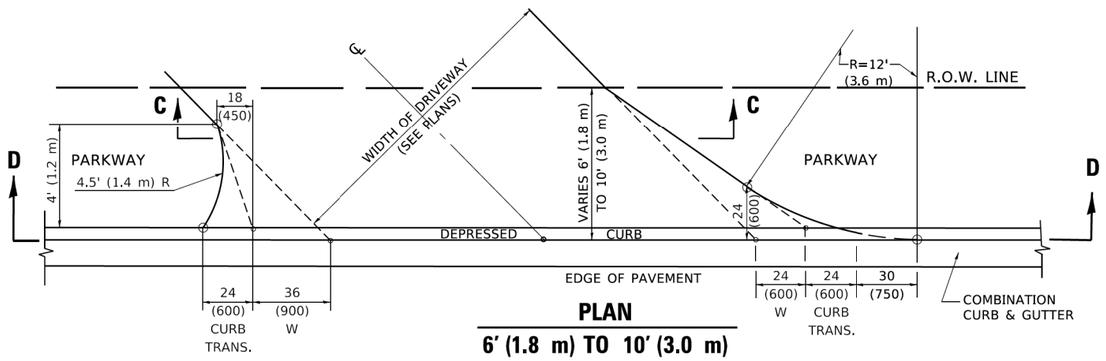


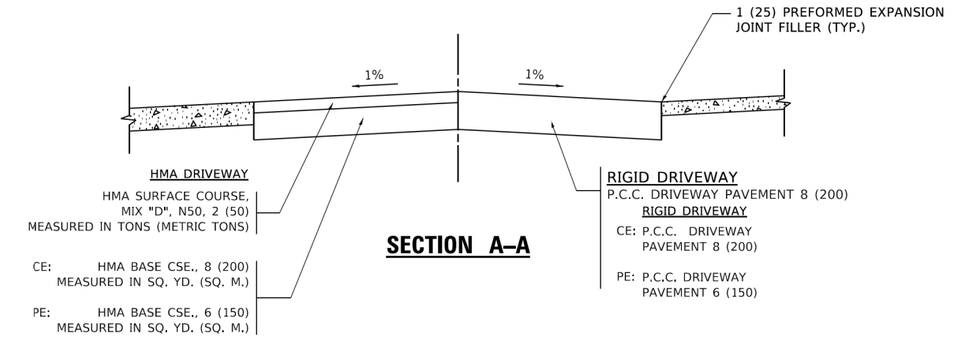
PLAN
10' (3.0 m) TO < 15' (4.5 m)



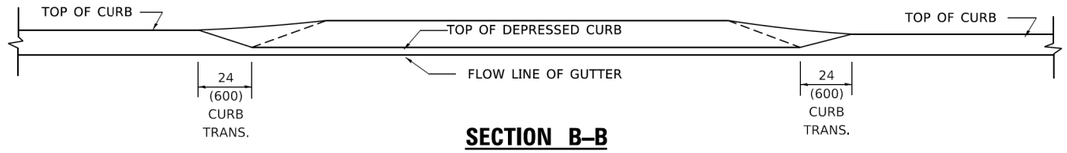
PLAN
6' (1.8 m) TO < 10' (3.0 m)



PLAN
6' (1.8 m) TO 10' (3.0 m)



SECTION A–A



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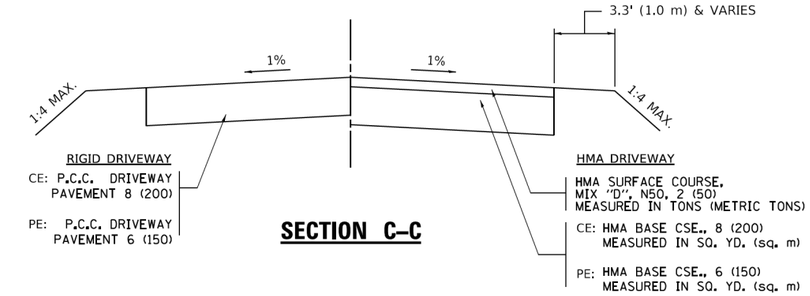

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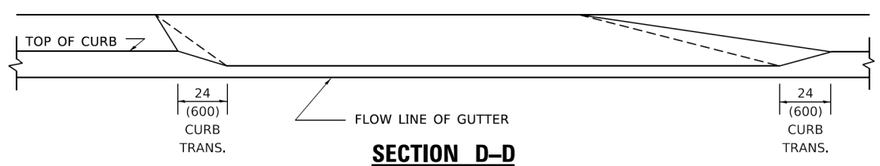

SECTION D–D

GENERAL NOTES

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE P.C.C. SIDEWALK SHALL EXTEND TO THE BACK OF CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

THE 1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

"W" VARIES FROM 36 (900) TO 5' (1.5 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED.

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	DRAWN -	REVISED - P. LaFLUER 04-15-03	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - R. BORO 01-01-07	
PLOT DATE = 3/27/2019	DATE - 11-06-95	REVISED - R. BORO 09-06-11	

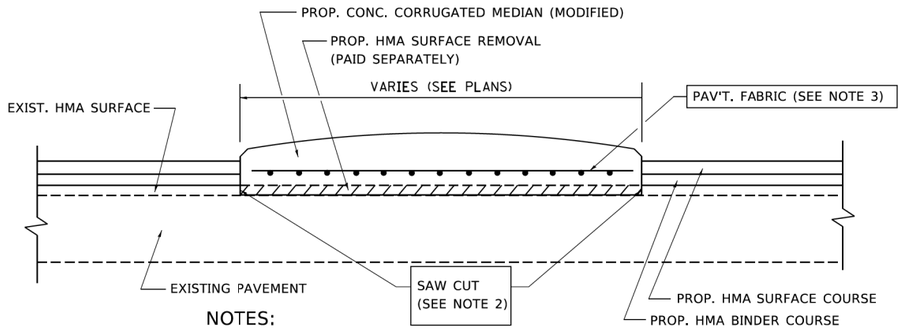
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS
DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5m)

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	289
	BD400–02 (BD–02)	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

bd02.dgn 3/27/2019 7:46:23 AM User:footemj



NOTES:

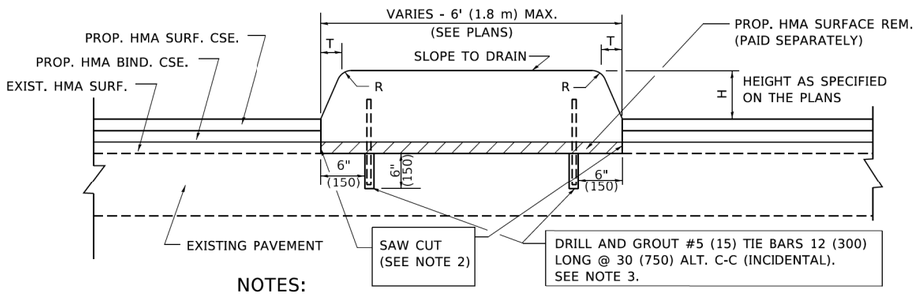
1. CORRUGATED MEDIAN (MODIFIED) SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 606 OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE PORTIONS OF STATE STANDARD 606306.

2. WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY DELETE THE SAW CUT IF A NEAT JOINT CAN BE OBTAINED BY MILLING THE HMA SURFACE TO BE REMOVED. SAW CUT WILL BE INCLUDED IN THE COST OF CORRUGATED MEDIAN (MODIFIED)

3. PAVEMENT FABRIC WILL BE INCLUDED IN THE COST OF CORRUGATED MEDIAN (MODIFIED)

DETAILS FOR CORRUGATED MEDIAN (MODIFIED)

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT (SQUARE METER) FOR "CORRUGATED MEDIAN (MODIFIED)"



H	R	T
6(150)	1(25)	1(25)
9(225)	1(25)	2(50)

NOTES:

1. CONCRETE MEDIAN TYPE SB (DOWELLED) SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF STATE STANDARD 606301 AND SECTION 606 OF THE STANDARD SPECIFICATIONS.

2. WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY DELETE THE SAW CUT IF A NEAT JOINT CAN BE OBTAINED BY MILLING THE HMA SURFACE TO BE REMOVED. SAW CUT WILL BE INCLUDED IN THE COST OF "CONCRETE MEDIAN TYPE SB (DOWELLED)"

3. FOR MEDIAN WIDTH LESS THAN 4' (1.2 m) USE ONE ROW OF #5 (15) BARS @ 30 (750) C-C ALONG THE MEDIAN CENTERLINE. TIE BARS WILL BE INCLUDED IN THE COST OF "CONCRETE MEDIAN TYPE SB (DOWELLED)"

DETAILS FOR CONCRETE MEDIAN TYPE SB (DOWELLED)

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT (SQUARE METER) FOR "CONCRETE MEDIAN TYPE SB (DOWELLED)"

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PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - E. GOMEZ 08-28-00	
PLOT DATE = 3/27/2019	DATE - 05-14-80	REVISED - R. BORO 01-01-07	

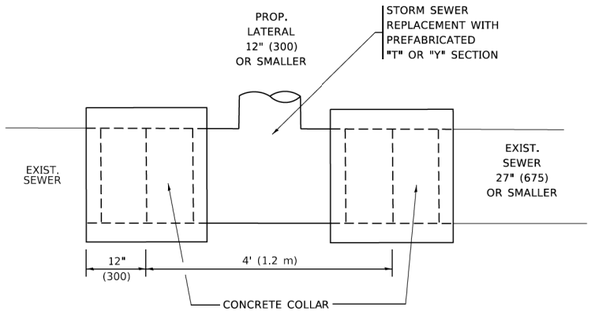
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS FOR CONCRETE MEDIAN TYPE SB (DOWELLED)
CORRUGATED MEDIAN (MODIFIED)

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

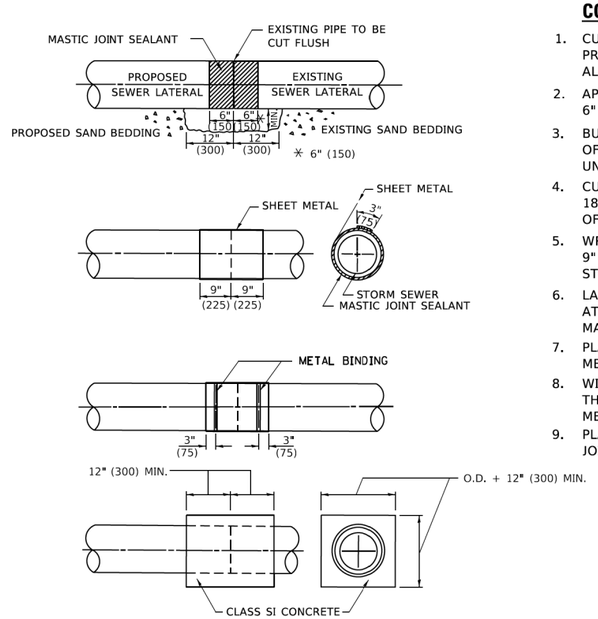
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	290
	BD600–02 (BD–5)	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

bd05.dgn 3/27/2019 7:49:21 AM User:footemj



DETAIL "A"

LATERAL CONNECTION TO EXISTING SEWER
OF 27" (675) OR SMALLER



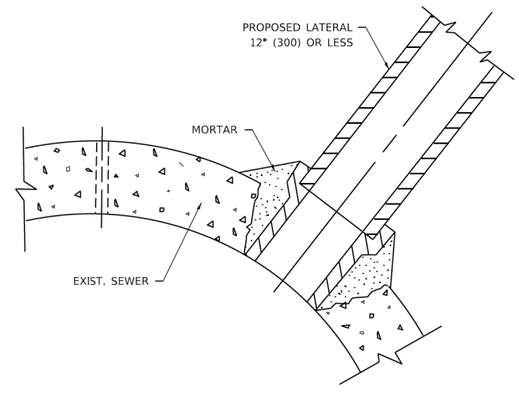
DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12' x 6' (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERANCE OF THE PIPE PLUS 3" (75) LONG.
5. WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
9. PLACE CLASS SI CONCRETE AROUND THE JOINT.

* ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.



DETAIL "C"

PROPOSED LATERAL
CONNECTION TO EXISTING SEWER
OF 30" (750) OR LARGER

NOTES:

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

I. THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.

II. CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:
- A) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".
- B) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS, THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

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	DRAWN -	REVISED - R. SHAH 09-09-94			
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - R. SHAH 10-25-94			
PLOT DATE = 3/27/2019	DATE - 07-25-90	REVISED - R. SHAH 06-12-96		SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. TO STA.	

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	291
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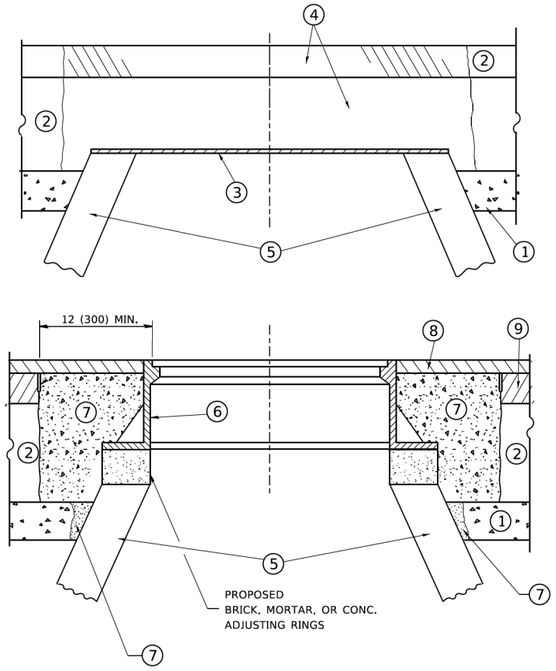
	ILLINOIS | FED. AID PROJECT			

bd7.dgn 3/27/2019 7:49:15 AM User:footemj



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1½ (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-1 * CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

* UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

LEGEND

1. SUB-BASE GRANULAR MATERIAL
2. EXISTING PAVEMENT
3. 36 (900) DIAMETER METAL PLATE
4. PROPOSED CRUSHED STONE AND HMA SURFACE MIX
5. EXISTING STRUCTURE
6. FRAME AND LID (SEE NOTES)
7. CLASS PP-1 * CONCRETE
8. PROPOSED HMA SURFACE COURSE
9. PROPOSED HMA BINDER COURSE

NOTES

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

LOCATION OF STRUCTURES

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

BASIS OF PAYMENT

REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."

THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

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	DRAWN -	REVISED - R. BORO 01-01-07	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - R. BORO 03-09-11	
PLOT DATE = 3/27/2019	DATE - 10-25-94	REVISED - R. BORO 12-06-11	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS FOR
FRAMES AND LIDS ADJUSTMENT WITH MILLING

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	BD600-03 (BD-8)	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

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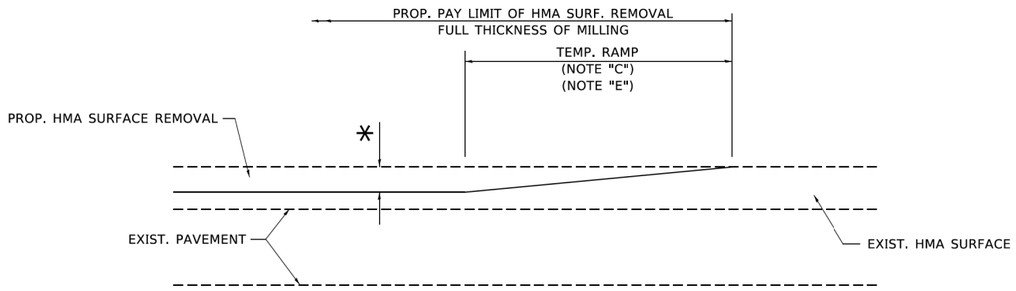
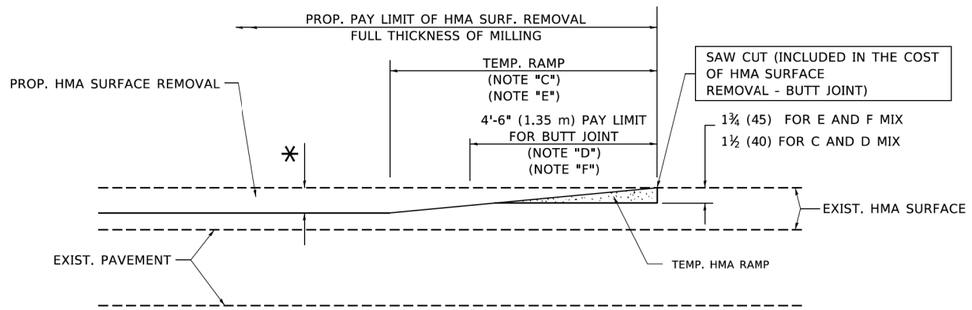


MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

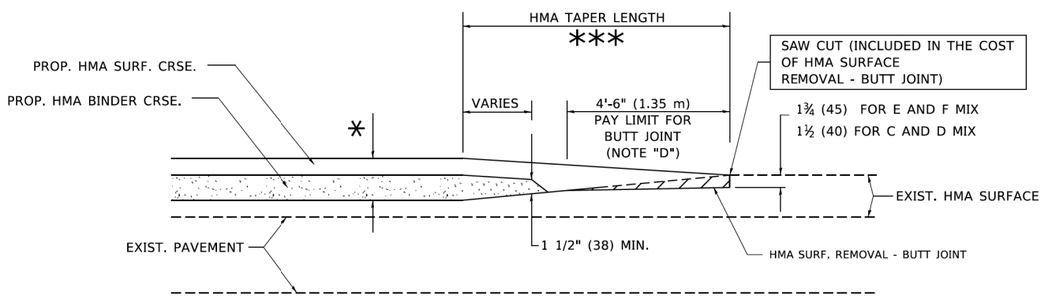


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

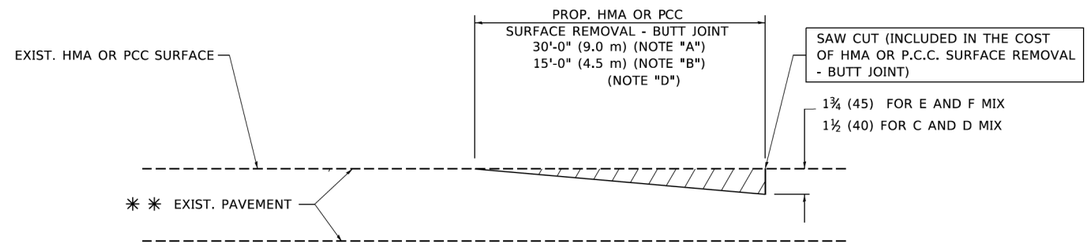
OPTION 2

TYPICAL TEMPORARY RAMP

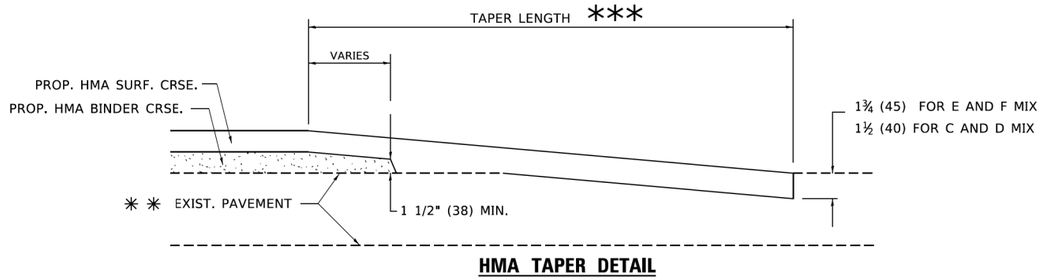


BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

A. MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B. MINOR SIDE ROADS.

C. THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.

D. THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.

E. TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.

F. INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT.

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

G. SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

*** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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PLOT DATE = 3/27/2019	DATE - 06-13-90	REVISED - R.BORO 01-01-07	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND HMA TAPER DETAILS

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	293
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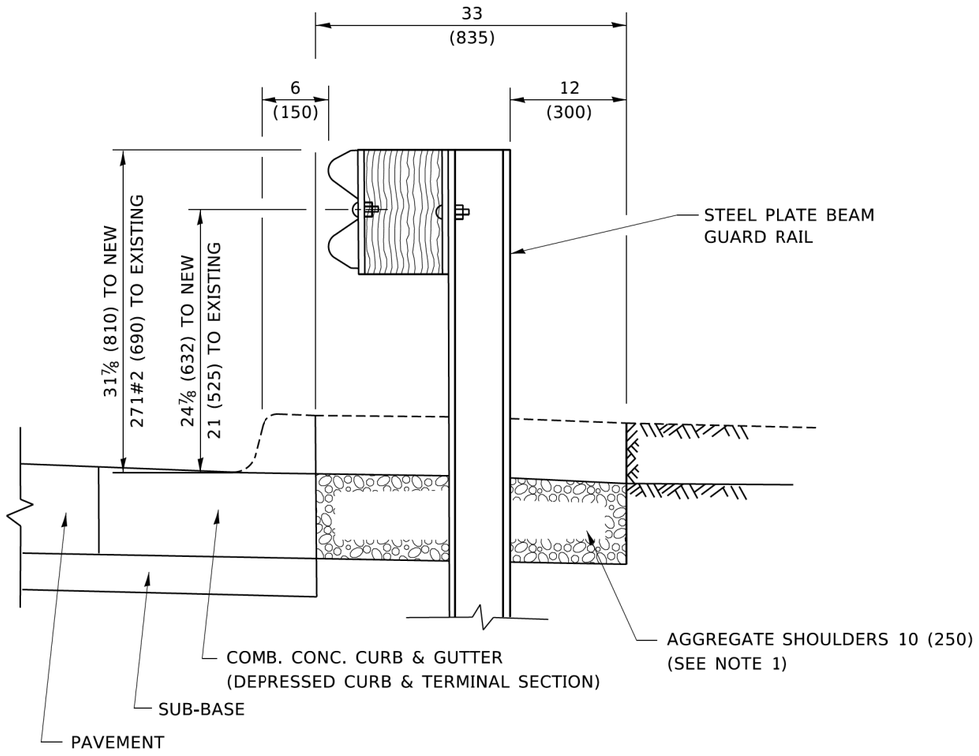
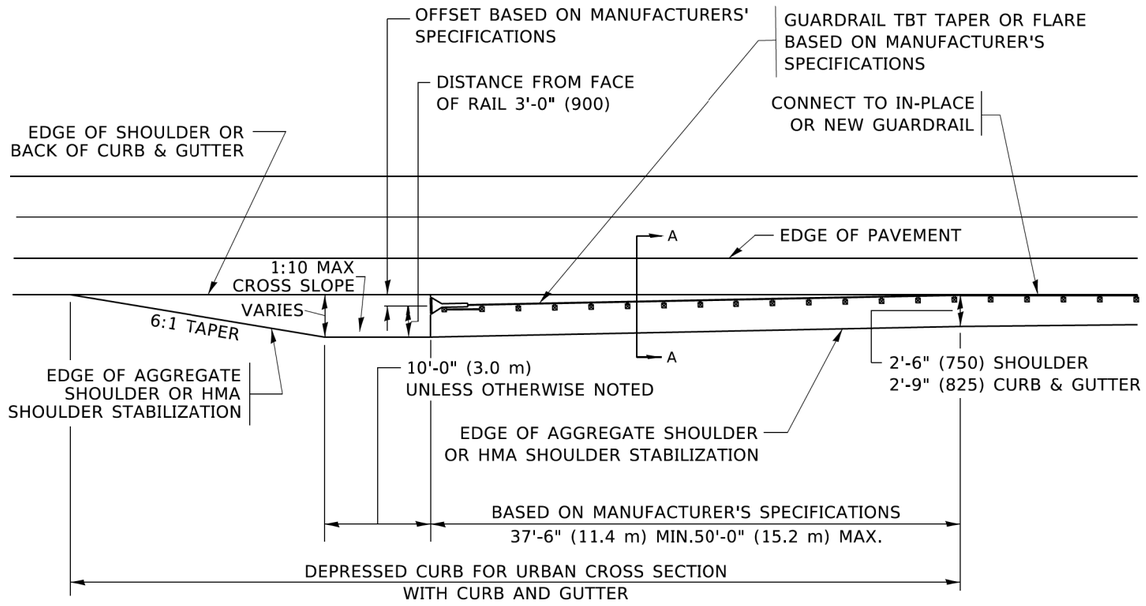


SECTION A–A

NOTES:

1. THE AGGREGATE SHOULDER, 10 (250) OR HMA SHOULDER, 6 (150) (IF REQUIRED) SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL.
2. "EXISTING" GUARDRAIL REFERS TO CONNECTING TERMINAL SECTION TO GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
3. THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER [FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]



DEPRESSED CURB AND GUTTER AND SHOULDER TREATMENT AT TBT TY. 1 SPL.

AGGREGATE SHOULDER, 10 (250) WILL BE PAID ACCORDING TO SECTION 481.

HMA SHOULDERS 6 (150) (IF REQUIRED) WILL BE PAID ACCORDING TO SECTION 482.

COMB. CONC. C&G, STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

TBT = TRAFFIC BARRIER TERMINAL

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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PLOT DATE = 3/27/2019	DATE - 09-22-90	REVISED - R. BORO 05-08-2015	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS FOR DEPRESSED CURB & GUTTER AND SHOULDER TREATMENT AT TBT TY. 1 SPL.

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	294
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	ILLINOIS FED. AID PROJECT			

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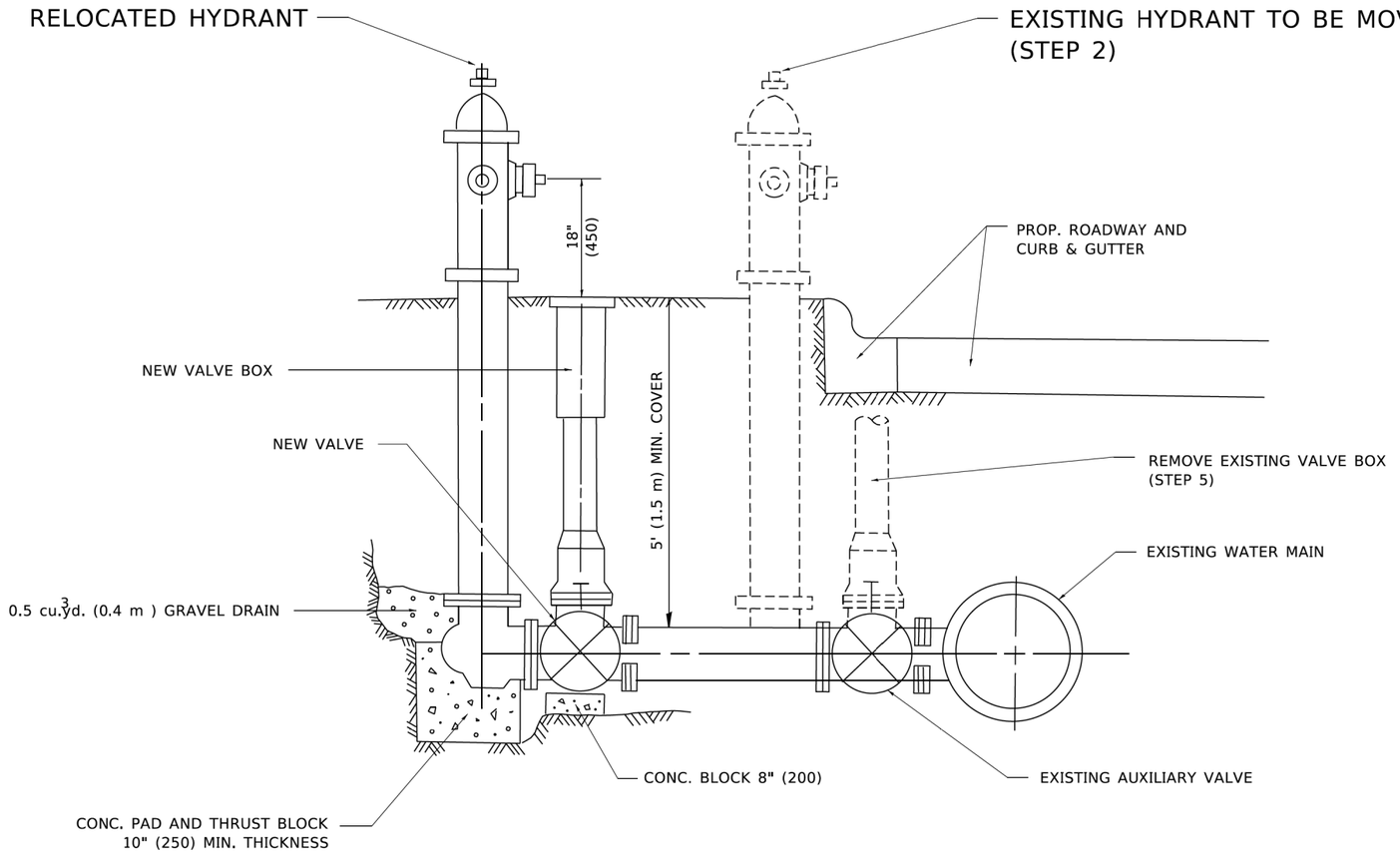

SEQUENCE OF CONSTRUCTION:

1. CLOSE EXISTING VALVE.
2. REMOVE EXISTING HYDRANT.
3. INSTALL HYDRANT EXTENSION AND NEW VALVE.
4. RELOCATE EXISTING HYDRANT.
5. OPEN EXISTING VALVE, REMOVE BOX.
6. BACKFILL.
7. FLUSH AND TEST FOR CHLORIDE RESIDUAL AND PROVIDE TEST.

NOTE:

ALL WORK TO BE DONE IN ACCORDANCE WITH ARTICLE 564 OF THE STANDARD SPECIFICATIONS. NEW VALVE AND BOX SHALL BE SAME MAKE AND MODEL AS EXISTING.

FIRE HYDRANT TO BE MOVED

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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PLOT DATE = 3/27/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FIRE HYDRANT TO BE MOVED

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	295
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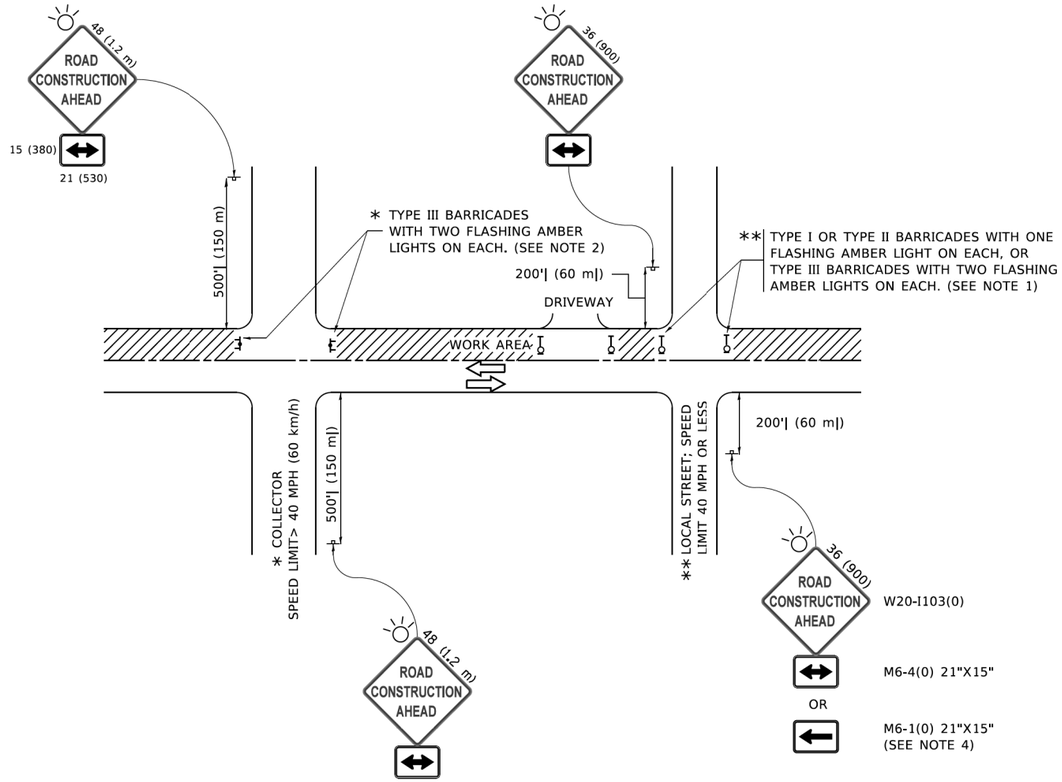

NOTES:

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
   a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
   a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
3. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
4. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
7. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in inches (millimeters) unless otherwise shown.

USER NAME = footemj	DESIGNED - L.H.A.	REVISED - A. HOUSEH 10-15-96	
	DRAWN -	REVISED - T. RAMMACHER 01-06-00	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - A. SCHUETZE 07-01-13	
PLOT DATE = 3/4/2019	DATE - 06-89	REVISED - A. SCHUETZE 09-15-16	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	296
	TC-10	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

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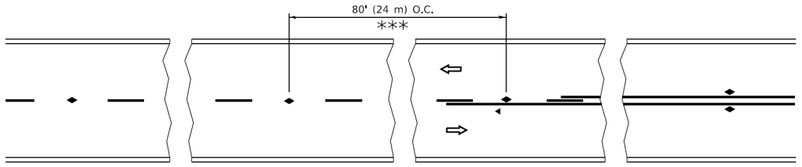
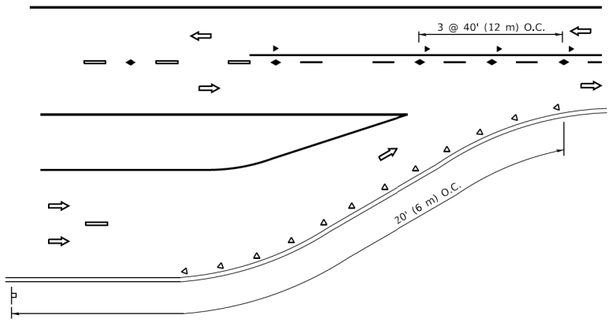


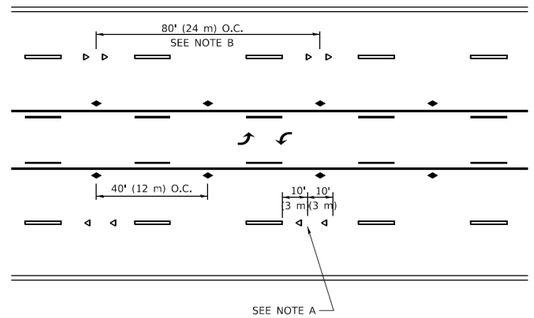
*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

TWO–LANE/TWO–WAY

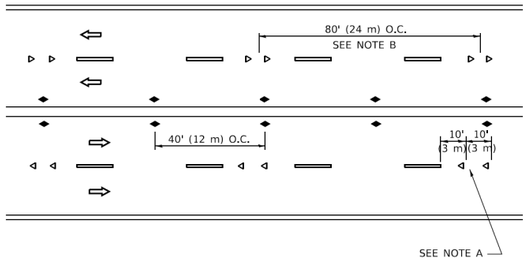
SEE FIGURE 3B-14 MUTCD



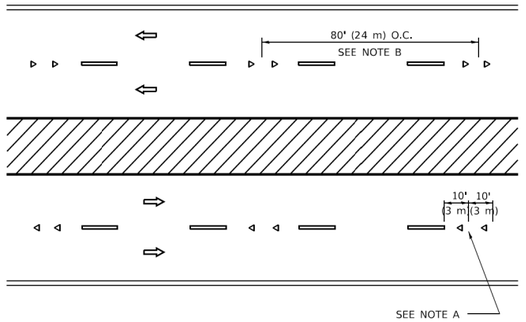
LANE REDUCTION TRANSITION



TWO–WAY LEFT TURN



MULTI–LANE/UNDIVIDED



MULTI–LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.
4. MARKERS ARE TO BE USED ADJACENT TO BOTH SOLID WHITE LINES IN DUAL LEFT TURN LANES

SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (W/O)
- TWO-WAY AMBER MARKER

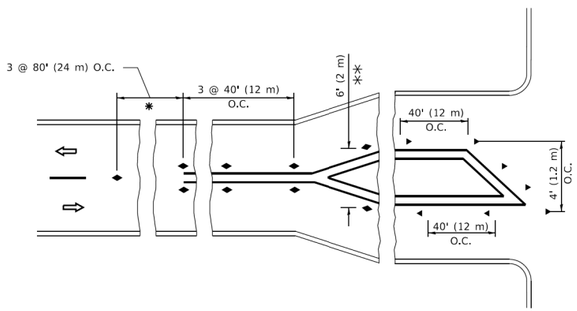
LANE MARKER NOTES

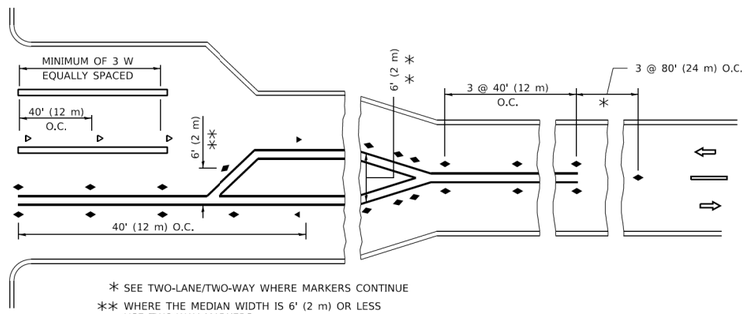
A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.





* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE

** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

TURN LANES

All dimensions are in inches (millimeters) unless otherwise shown.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS
RAISED REFLECTIVE PAVEMENT MARKERS (SNOW–PLOW RESISTANT)

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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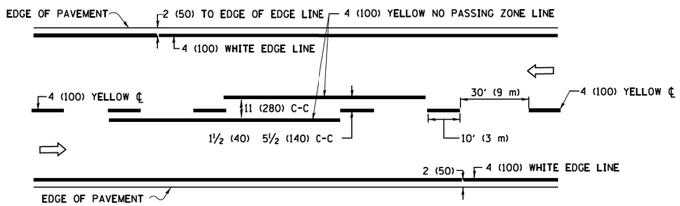
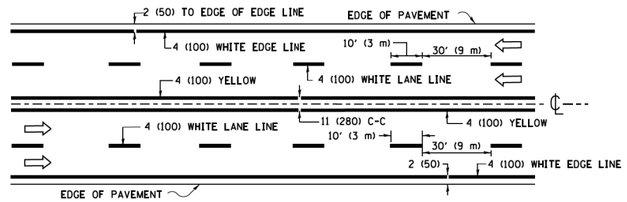
	TC-11	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

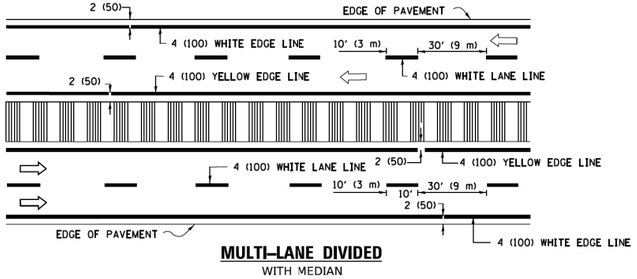
tc11.dgn 3/4/2019 10:29:08 AM User:footemj



2–LANE ROADWAY

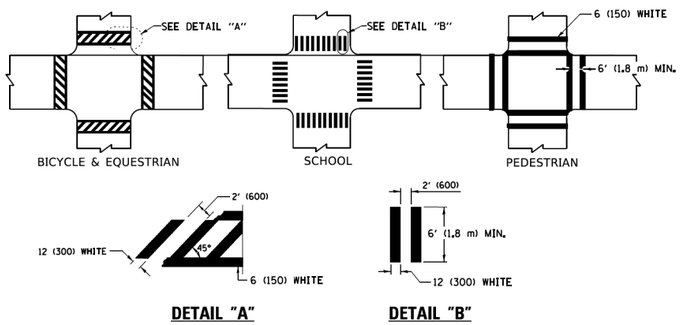


MULTI–LANE UNDIVIDED



MULTI–LANE DIVIDED
WITH MEDIAN

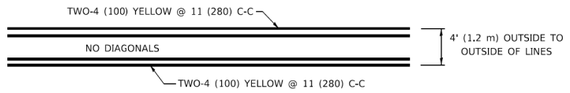
TYPICAL LANE AND EDGE LINE MARKING



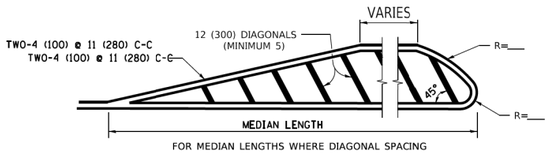
DETAIL "A" **DETAIL "B"**

TYPICAL CROSSWALK MARKING

✱ MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES



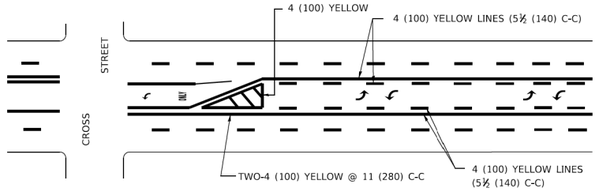
4' (1.2 m) WIDE MEDIANS ONLY



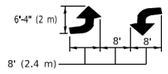
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

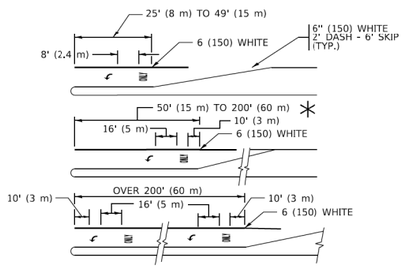


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO–WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

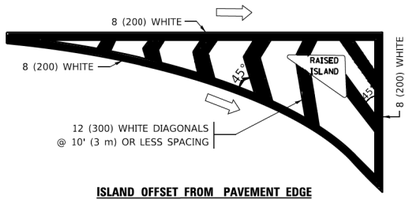


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
AREA = 15.6 SQ. FT. (1.5 m²) **ONLY** AREA = 20.8 SQ. FT. (1.9 m²)

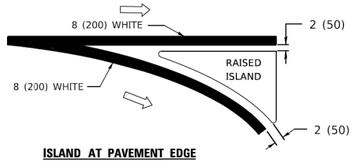
✱ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

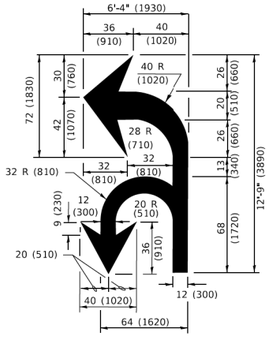


ISLAND OFFSET FROM PAVEMENT EDGE

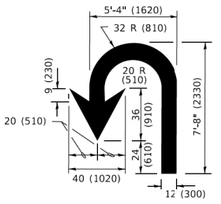


ISLAND AT PAVEMENT EDGE

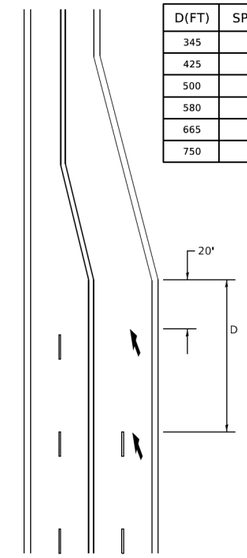
TYPICAL ISLAND MARKING



COMBINATION LEFT AND U–TURN



U–TURN



LANE REDUCTION TRANSITION

✱ LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT, OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m² EACH "X"=54.0 SQ. FT. (5.0 m²
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8')	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

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PLOT DATE = 3/4/2019	DATE - 03-19-90	REVISED - C. JUCIUS 04-12-16	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	298
	TC–13	CONTRACT NO. 61H14		
		ILLINOIS | FED. AID PROJECT		

Plotted: 3/4/2019 10:34:32 AM User:footemj

TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER

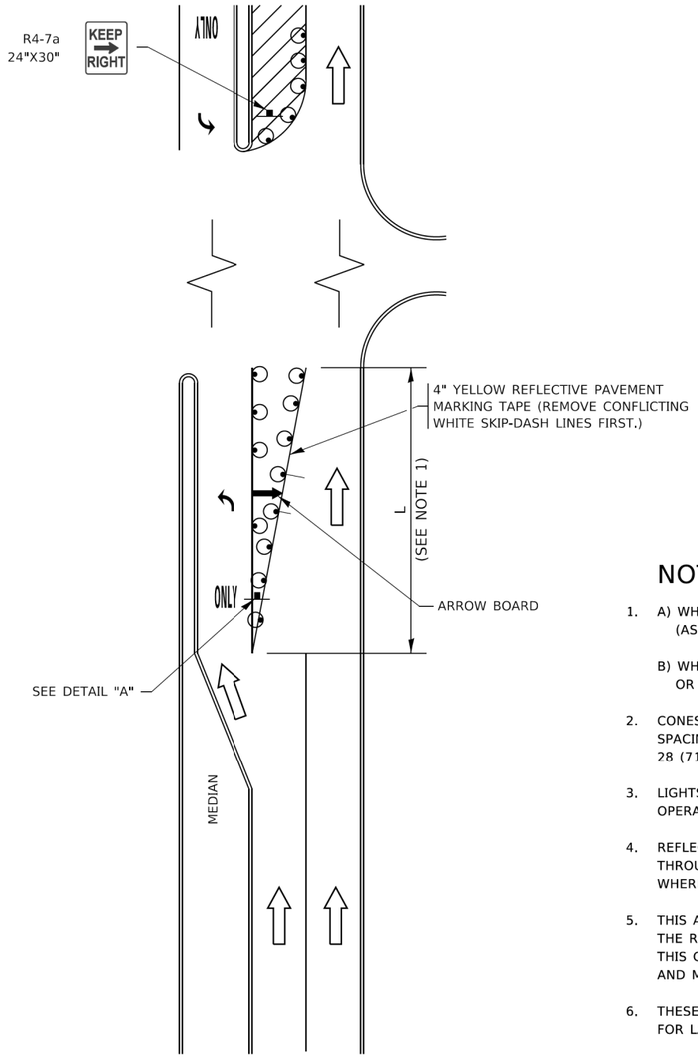


FIGURE 1

LEGEND

- WORK AREA
- LANE OPEN TO TRAFFIC
- ARROW BOARD
- TYPE I OR II BARRICADE OR DRUM WITH STEADY BURN LIGHT
- DRUM WITH STEADY BURN LIGHT
- SIGN ASSEMBLY
- TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

NOTES:

1. A) WHEN "L" IS ≤ THE STORAGE LENGTH OF THE TURN LANE (AS SHOWN IN FIG. 1), USE FIGURE 1.

   B) WHEN "L" IS > THE STORAGE LENGTH OF THE TURN LANE OR THE TURN LANE IS WITHIN THE LANE CLOSURE, USE FIGURE 2.

2. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.

3. LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.

4. REFLECTIVE TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED THROUGHOUT THE BARRICADED AREAS OF EACH TURN BAY AS SHOWN WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN (14) DAYS.

5. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-I100R 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.

6. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.

7. THE SIGNS SHALL BE MOUNTED ABOVE THE BARRICADES/DRUMS ON SEPARATE SIGN SUPPORTS THAT MEET NCHRP 350 OR MASH PREQUIREMENTS.

8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

TURN BAY ENTRANCE WITHIN A LANE CLOSURE

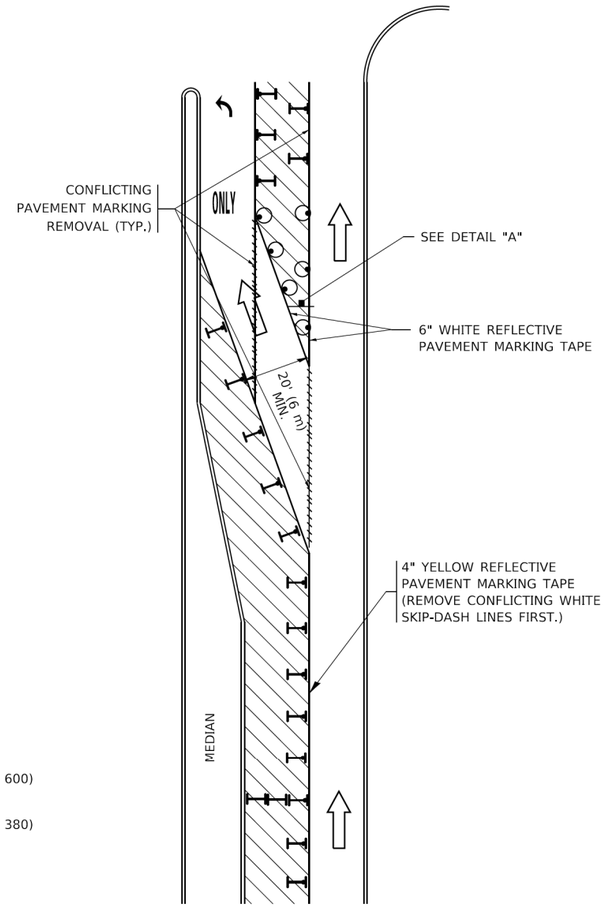
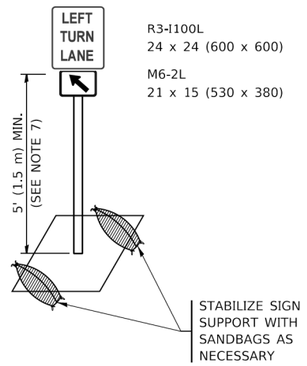


FIGURE 2



DETAIL A

All dimensions are in inches (millimeters) unless otherwise shown.

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PLOT SCALE = 50.0000 ' / in.	CHECKED - A. HOUSEH 10-12-96	REVISED - A. SCHUETZE 09-15-16	
PLOT DATE = 3/4/2019	DATE - T. RAMMACHER 01-06-00	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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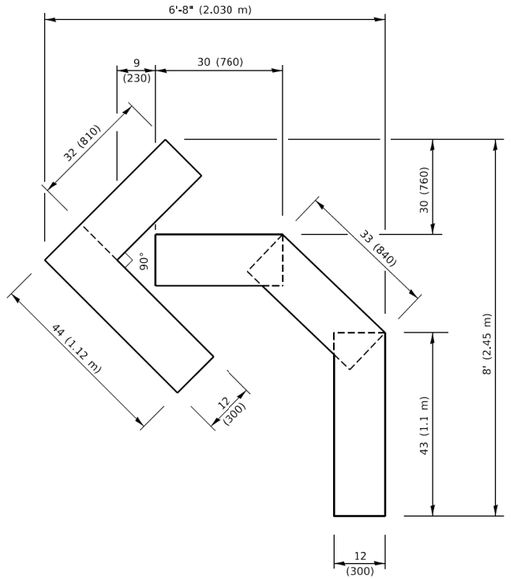
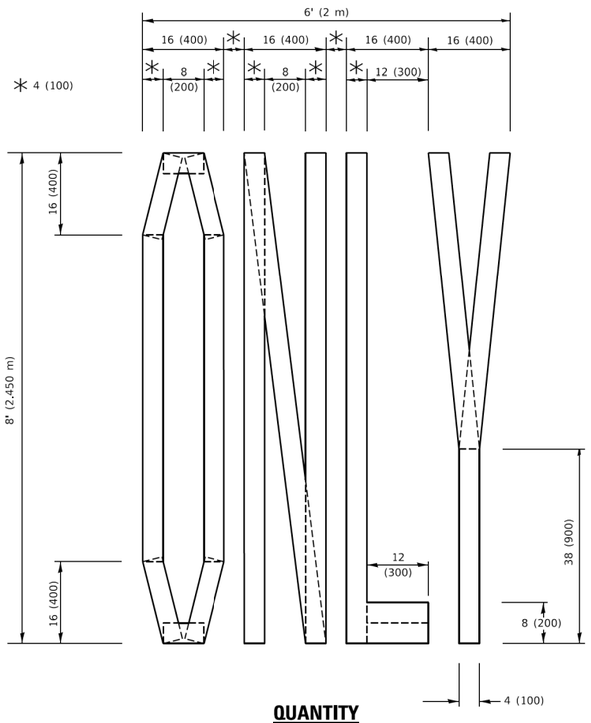
	TC-14	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

tc14.dgn 3/4/2019 10:36:01 AM footemj



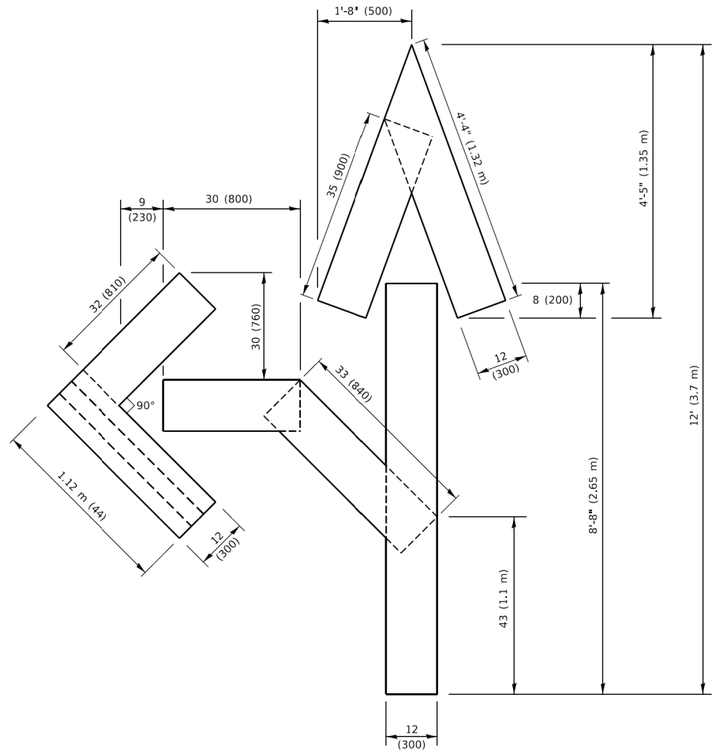
QUANTITY

4 (100) LINE = 45.5 ft. (13.9 m)
15.2 sq. ft. (1.41 sq. m)



QUANTITY

4 (100) LINE = 64.1 ft. (19.5 m)
21.4 sq. ft. (1.99 sq. m)

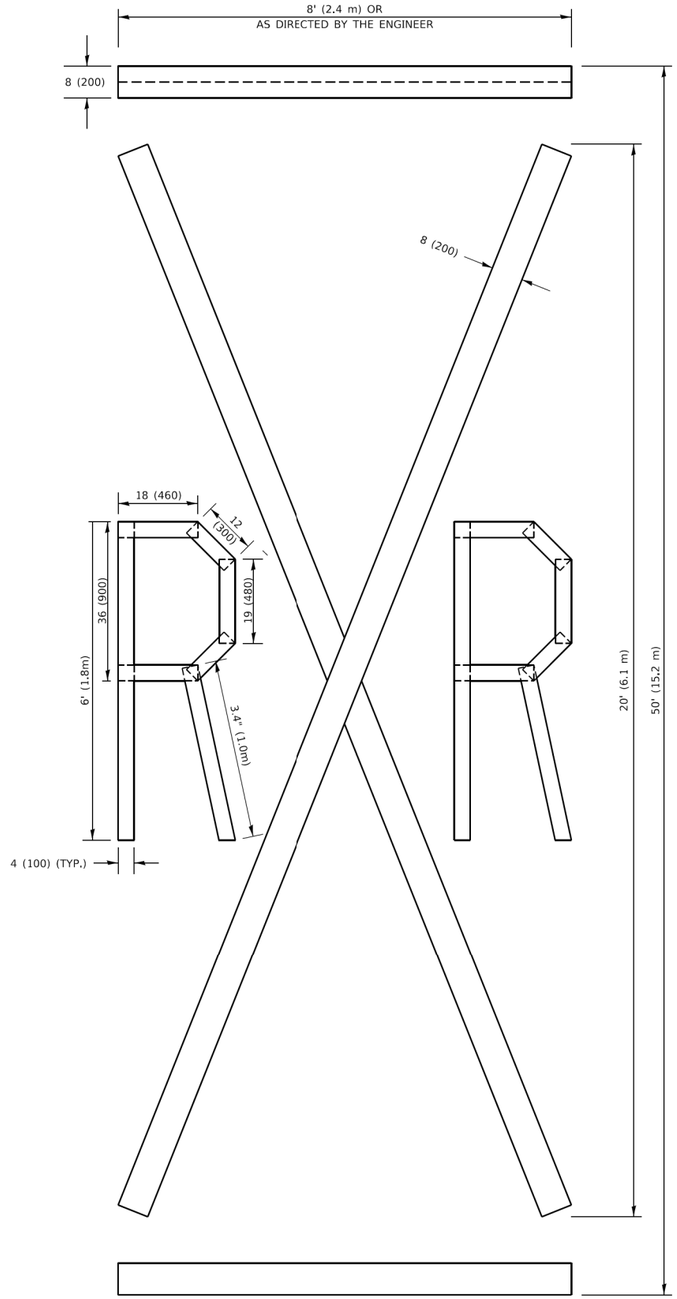


QUANTITY

4 (100) LINE = 82.5 ft. (25.1 m)
27.5 sq. ft. (2.53 sq. m)

NOTE:

ALL QUANTITIES OF PLACEMENT ARE REPRESENTED IN LINEAR FEET OF 4" LINES TO MATCH THE 4" TEMPORARY TAPE PAY ITEM AND REPRESENTS THE TOTAL QUANTITY OF 4" TAPE REQUIRED.



QUANTITY

4 (100) LINE = 225.9 ft. (68.9 m)
75.3 sq. ft. (6.99 sq. m)

All dimensions are in inches (millimeters) unless otherwise shown.

MODEL: Default
FILE NAME: pw:\\IL084:EIBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist1Std22x34\CADData\CADsheets\tc16.dgn

USER NAME = footemj	DESIGNED -	REVISED - T. RAMMACHER 03-02-98	
	DRAWN -	REVISED - E. GOMEZ 08-28-00	
PLOT SCALE = 50.0068 ' / in.	CHECKED -	REVISED - E. GOMEZ 08-28-00	
PLOT DATE = 3/4/2019	DATE - 09-18-94	REVISED - A. SCHUETZE 09-15-16	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3533	17-00083-00-PV	COOK	421	300
	TC-16	CONTRACT NO. 61H14		
	ILLINOIS FED. AID PROJECT			

tc16.dgn 3/4/2019 10:37:35 AM User=footemj