

06-14-13 LETTING ITEM 144

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SEE SHEET 2

TRAFFIC DATA

ADT:
EAST AVENUE 8,800 (2015)

POSTED SPEED

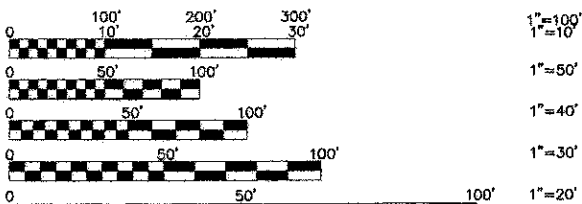
25 MPH (EXISTING)
25 MPH (PROPOSED)

DESIGN DESIGNATION

COLLECTOR

DESIGN SPEED

30 MPH (EXISTING)
30 MPH (PROPOSED)



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT
UTILITY
LOCATION
INFORMATION FOR
EXCAVATION
CALL 811

Know what's below.
Call before you dig.

Frank Novotny & Associates, Inc.
825 Midway Drive • Willowbrook, IL • Telephone: (630) 887-8640 • Fax: (630) 887-0132
Civil Engineers
Municipal Consultants
ILLINOIS PROFESSIONAL DESIGN FIRM NO. 184-000928

FNA PROJECT NO. 09094 DRAWN/DESIGNED JFP/AMS CHECKED/APPROVED JEF/JEF

REVISIONS			
NO.	BY	DATE	DESCRIPTION
1	JEF	3-13-13	PER I.D.O.T. REVIEW

CONTRACT NO. 63837

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

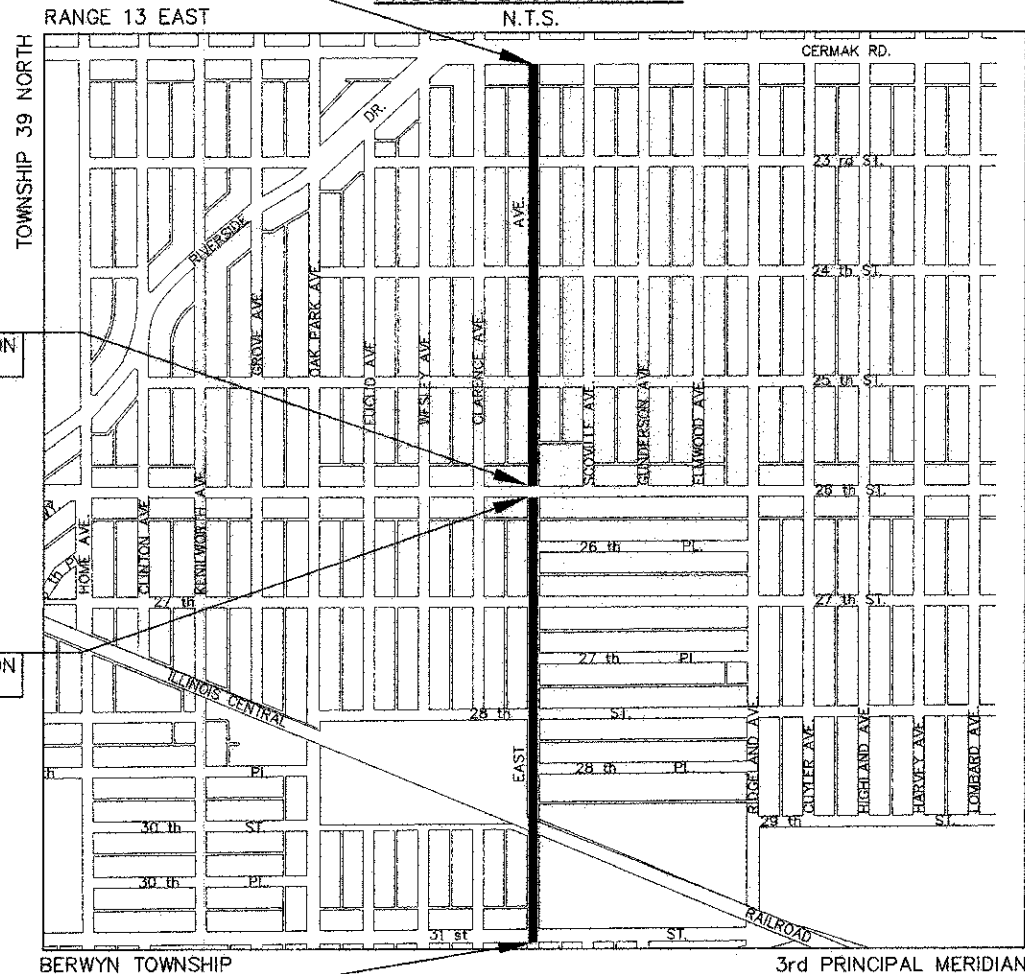
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

FAU 2779 (EAST AVENUE)
FAU 1453 (31st STREET) TO FAU 1463 (CERMAK ROAD)

RESURFACING
SECTION 09-00167-00-RS
PROJECT M-4003(087)
CITY OF BERWYN
COOK COUNTY
C-91-031-13

EAST AVENUE
PROJECT ENDS
STA. 100+08

PROJECT LOCATION MAP



EAST AVENUE
PROJECT OMISSION
STA. 73+98

EAST AVENUE
PROJECT OMISSION
STA. 73+62

EAST AVENUE
PROJECT BEGINS
STA. 46+69

— DENOTES LOCATION OF IMPROVEMENT
— LENGTH OF PROJECT

GROSS LENGTH OF PROJECT 5,339 FEET (1.01 MILES)
NET LENGTH OF PROJECT 5,303 FEET (1.00 MILES)

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2779	09-00167-00-RS	COOK	31	1
F.H.W.A. REG.		ILLINOIS PROJECT	M-4003(087)	

CONTRACT NO. 63837



LOCATION OF SECTION INDICATED THIS: —

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED MARCH 20, 2013
CITY OF BERWYN Robert J. Lovero
ROBERT J. LOVERO, MAYOR

PASSED APRIL 11, 2013
DISTRICT 1 ENGINEER OF LOCAL ROADS & STREETS
C. J. Holt

RELEASING FOR BID
BASED ON LIMITED
REVIEW April 12, 2013
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER
John E. Fitzgerald

John E. Fitzgerald
JOHN E. FITZGERALD, P.E.
IL. P.E. NO. 062-048559
EXPIRES 11-30-2013
03/22/13
DATE

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

PROGRAM AND OFFICE ENGINEER: CHARLES F. RIDDLE, P.E. (847)705-4406 SCHAUMBURG, IL

GENERAL CONSTRUCTION NOTES PAVING AND STORM SEWERS

SPECIFICATIONS

THE JANUARY 1, 2012 EDITION OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", PREPARED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION AND THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" SHALL GOVERN ALL WORK ASSOCIATED WITH THIS PROJECT. THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" MAY GOVERN OTHER WORK ON THIS PROJECT AS INDICATED BY REFERENCE.

CARE IN EXCAVATION

CARE SHALL BE EXERCISED BY THE CONTRACTOR IN CARRYING OUT EARTH AND/OR TRENCHING OPERATIONS SO THAT LOCAL UTILITY SERVICES, WATER VALVES, MANHOLES, CATCH BASINS, INLETS, BUFFALO BOXES, AND OTHER STRUCTURES ARE NOT DAMAGED OR REMOVED. ANY DAMAGE DONE BY THE CONTRACTOR, WHETHER THE STRUCTURE OR SERVICE IS VISIBLE AT THE GROUND SURFACE OR NOT, SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR IN ACCORDANCE WITH ARTICLES 105.07 AND 107.20.

NOTIFICATION OF PUBLIC UTILITIES

PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OFFICIALS OF THE PUBLIC WORKS DEPARTMENT OF THE LOCAL MUNICIPALITY, J.U.L.E. AT 1-800-892-0123 OR 811, AND OTHER PUBLIC AND PRIVATE UTILITIES SO THAT ARRANGEMENTS CAN BE MADE TO LOCATE THEIR VARIOUS FACILITIES WITHIN THE LIMITS OF CONSTRUCTION UNDER THIS CONTRACT, AS WELL AS TO PROVIDE ADEQUATE PROTECTION AND INSPECTION THERETO. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES IN THE FIELD.

TRAFFIC CONTROL DEVICES

BARRICADES AND WARNING SIGNS SHALL BE PROVIDED IN ACCORDANCE WITH ARTICLE 107.14 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".

PROTECTION OF SIGNS AND PROPERTY

ALL TRAFFIC SIGNS, STREET SIGNS, ETC., THAT INTERFERE WITH THE CONSTRUCTION OPERATIONS SHALL BE REMOVED AND PLACED AT NEW LOCATIONS AS DESIGNATED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE COST OF THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. IN ADDITION, ALL MAIL BOXES THAT INTERFERE WITH CONSTRUCTION SHALL BE SIMILARLY RELOCATED AT NO ADDITIONAL COST IN ACCORDANCE WITH ARTICLES 107.20 AND 107.21 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".

SUPERINTENDENCE

SPECIAL ATTENTION IS DRAWN TO ARTICLE 105.06 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" WHICH REQUIRES THE CONTRACTOR TO HAVE A COMPETENT SUPERINTENDENT ON THE PROJECT SITE AT ALL TIMES, IRRESPECTIVE OF THE AMOUNT OF WORK. THE SUPERINTENDENT SHALL BE CAPABLE OF READING AND UNDERSTANDING THE PLANS AND SPECIFICATIONS, SHALL HAVE FULL AUTHORITY TO EXECUTE ORDERS TO EXPEDITE THE PROJECT AND SHALL BE RESPONSIBLE FOR SCHEDULING AND HAVING CONTROL OF ALL THE WORK AS THE AGENT OF THE GENERAL CONTRACTOR. FAILURE TO COMPLY WITH THIS PROVISION WILL RESULT IN A SUSPENSION OF WORK AS PROVIDED IN ARTICLE 105.07.

SAWING EXISTING IMPROVEMENTS

ALL PERMANENT TYPE PAVEMENTS OR OTHER PERMANENT IMPROVEMENTS WHICH ABOUT THE PROPOSED IMPROVEMENT AND MUST BE REMOVED, SHALL BE SAWED AS DIRECTED PRIOR TO REMOVAL. ALL ITEMS SO REMOVED SHALL BE REPLACED WITH SIMILAR CONSTRUCTION MATERIALS TO THEIR ORIGINAL CONDITION OR BETTER. PAYMENT FOR SAWING SHALL BE INCLUDED IN THE COST FOR THE REMOVAL OF EACH ITEM, AND REPLACEMENT WILL BE PAID FOR UNDER THE RESPECTIVE ITEMS IN THE CONTRACT UNLESS OTHERWISE INDICATED. SAW CUTTING FOR PATCHES WILL BE INCLUDED IN THE COST OF THE PATCHING ITEM. EXISTING DRIVEWAY PAVEMENT AND SIDEWALK TO REMAIN IN PLACE SHALL BE SAWCUT TO PROVIDE A NEAT VERTICAL FACE BETWEEN THE PROPOSED AND THE EXISTING, AND SUCH COST SHALL BE CONSIDERED INCLUDED IN THE COST OF THE CONTRACT.

CONSTRUCTION LAYOUT STAKES

THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH WOODEN STAKES OR OTHER LAYOUT MATERIALS FOR LAYOUT OF THE LINES AND GRADES OF THE PROJECT. FAILURE TO PROVIDE STAKES IN A TIMELY MANNER WILL RESULT IN A DELAY IN TAKEOUT WHICH WILL BE APPLICABLE AGAINST THE TIME LIMIT FOR COMPLETION SHOWN IN THE PROJECT SPECIFICATIONS. LINE AND GRADE WILL BE ESTABLISHED BY THE ENGINEER AT REGULAR INTERVALS ON PERMANENTLY PAVED SURFACES, SIDEWALKS OR STAKES AT THE ENGINEER'S OPTION, ALL WITHIN THE PUBLIC RIGHT-OF-WAY AND SHALL BE TRANSFERRED BY THE CONTRACTOR TO THE ACTUAL LINE OF CONSTRUCTION.

PROJECT SAFETY

WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1-1/2 INCHES WHERE THE SPEED LIMIT IS 45 MPH OR LESS AND 1 INCH WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH. WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).

BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HOT-MIX ASPHALT TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.

THE CONTRACTOR SHALL COMPLY WITH AND OBSERVE THE RULES AND REGULATIONS OF O.S.H.A. AND APPROPRIATE AUTHORITIES REGARDING SAFETY PROVISIONS. THE CONTRACTOR, ENGINEER, AND OWNER SHALL EACH BE RESPONSIBLE FOR THEIR OWN RESPECTIVE AGENTS AND EMPLOYEES.

THE ENGINEER AND OWNER ARE NOT RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, TIME OF PERFORMANCE, PROGRAMS, OR FOR ANY SAFETY PRECAUTIONS USED BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXECUTION OF HIS WORK IN ACCORDANCE WITH THE DOCUMENTS AND SPECIFICATIONS.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS PRIOR TO THE PLACEMENT OF ANY TEMPORARY TRAFFIC CONTROL DEVICES.

MISCELLANEOUS

ALL PATCHING ON THE HOT-MIX ASPHALT PORTAINS OF THIS PROJECT WILL BE MARKED OUT AND CONSTRUCTED AFTER MILLING. A PROOF ROLL WILL BE REQUIRED PRIOR TO PATCHING.

SIDEWALKS SHALL BE INCREASED TO 7" THICKNESS AT ALL DRIVEWAYS.

PROTECTIVE COAT SHALL BE USED ON ALL PORTLAND CEMENT CONCRETE SURFACE IN ACCORDANCE WITH ARTICLES 420.21, 420.22, AND 420.23 OF THE STANDARD SPECIFICATIONS.

BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE PAVEMENT MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.

MWRDGC NOTES

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO
LOCAL SEWER SYSTEMS SECTION

TYPICAL GENERAL NOTES

- The MWRD Local Sewer Systems Section Field Office must be notified at least two (2) working days prior to the commencement of any work (call 708/588-4055).
- Elevation datum is U.S.G.S.
Conversion equation is N/A
- No floor drains
- No footing drains/downspouts
- All sanitary sewer pipe materials and joints (and storm sewer pipe materials and joints in a combined sewer area) shall conform to:

Pipe Material Spec. Joint Spec.

Vitrified Clay Pipe
VCP (C-700) C-425
VCP (No-Bel)(C-700) C-425
Joint D-1784

Concrete Pipe (C-14)
RCP (C-76) C-443
ACP (C-428) D-1869

ABS Sewer Pipe
Solid Wall 6" dia. SDR 23.5
ABS D-2751 D-2751

ABS Composite/Truss Pipe
8" - 15" dia.
ABS D-2680 D-2680

PVC Gravity Sewer Pipe
6" - 15" dia. SDR 26
D-2241 D-3139
AWWA-C-900 D-3139

18" - 27" dia. F/oy=46
F-679 D-3212 or
D-2855

CISP A-74 C-564
DIP A-21.51 A-21.11

(Note: The District has approved less common pipe materials on a qualified basis in addition to those above. Please contact the District if considering using pipe not listed above.)

- All sanitary sewer construction (and storm sewer construction in combined sewer areas), requires stone bedding with stone 1/4" to 1" in size, with minimum bedding thickness equal to 1/4 the outside diameter of the sewer pipe, but not less than four (4) inches nor more than eight (8) inches. Materials shall be CA-11 or CA-13 and shall be extended at least 12" above the top of the pipe when using PVC.
- Non-shear "Band-Seal" or similar flexible-type couplings shall be used in the connection of sewer pipe of dissimilar materials.
- When connecting to an existing sewer main by means other than an existing wye, tee, or an existing manhole, one of the following methods shall be used:
 - Circular saw-cut of sewer main by proper tools ("Shower-Top" machine or similar) and proper installation of hub-wye saddle or hub-tee saddle.
 - Remove an entire section of pipe (breaking only the top of one bell) and replace with a wye or tee branch section.
 - With pipe cutter, neatly and accurately cut out desired length of pipe for insertion of proper fitting, using "Band-Seal" or similar couplings to hold it firmly in place.
- Wherever a sanitary/combined sewer crosses under a water main, the minimum vertical distance from the top of the sewer to the bottom of the water main shall be 18 inches. Furthermore, a minimum horizontal distance of 10 feet between sanitary/combined sewers and water mains shall be maintained unless: the sewer is laid in a separate trench, keeping a minimum 18" vertical separation; or the sewer is laid in the same trench with a water main located at the opposite side on a bench of undisturbed earth, keeping a minimum 18" vertical separation. if either the vertical or horizontal distances described above cannot be maintained or the sewer crosses above the water main, the sewer shall be constructed to water main standards.
- All existing septic systems shall be abandoned. Abandoned tanks shall be filled with granular material or removed.
- All sanitary manholes, and also storm manholes in combined sewer areas, shall have a minimum inside diameter of 48 inches, and shall be cast-in-place or pre-cast reinforced concrete. Resilient connectors, conforming to ASTM C-923, shall be used between manhole and pipe(s) for all sanitary and combined sewer structures.

BENCHMARKS

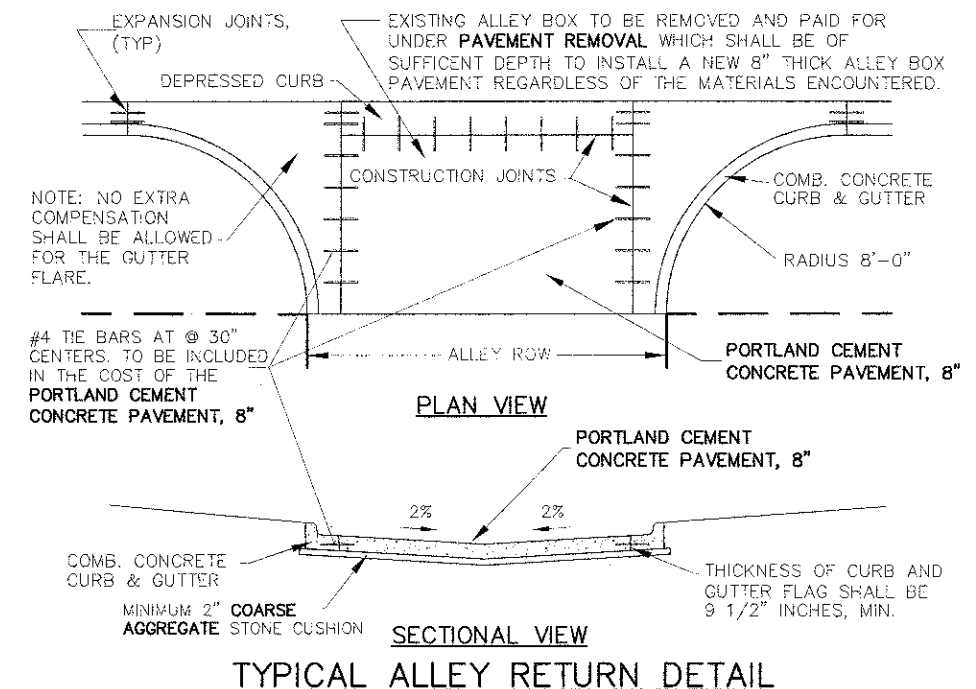
- TOP OF NW BOLT ON FIRE HYDRANT AT NE CORNER OF 28th STREET AND EAST AVENUE
USGS DATUM: ELEV.=609.73
- TOP OF NW BOLT ON FIRE HYDRANT AT SW CORNER OF CERMAK ROAD AND EAST AVENUE
USGS DATUM: ELEV.=616.92

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280001-07	TEMPORARY EROSION CONTROL SYSTEMS
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886001-01	DETECTOR LOOP INSTALLATIONS
886006-01	TYPICAL LAYOUTS FOR DETECTION LOOPS

SPECIAL PROJECT NOTES

- ALL SAWCUTS SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEMS FOR WHICH THE WORK APPLIES.
- ALL EXISTING FRAMES AND LIDS THAT ARE TO BE REPLACED (AS DIRECTED BY THE ENGINEER), SHALL BE SALVAGED TO THE CONTRACTOR.
- ALL COMED HANDHOLES AND MWRDGC MANHOLES TO BE ADJUSTED (BY OTHERS).
- MEET EXISTING CURB AND FLOW LINE ELEVATIONS AT REPLACEMENT LIMITS.
- NEW CURB AND GUTTER SHALL BE BACKFILLED WITH SUITABLE MATERIAL AT LOCATIONS REQUIRING SOD RESTORATION AND SHALL BE CONSIDERED INCLUDED IN THE COST OF "COMBINATION CONCRETE CURB AND GUTTER, TYPE B-12".
- "TOPSOIL FURNISH AND PLACE, 4 INCH" SHALL BE INSTALLED IN SOD RESTORATION AREAS DIRECTLY BACK OF NEW CURB AND GUTTER.
- IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO COORDINATE WITH THE CHICAGO CENTRAL & PACIFIC RAILROAD WHENEVER CONSTRUCTION ACTIVITY IS WITHIN 25 FEET OF THE RAILROAD RIGHT-OF-WAY. THE CONTRACTOR SHALL RETAIN FLAGMEN EMPLOYED AND DESIGNATED BY THE CHICAGO CENTRAL & PACIFIC RAILROAD TO MONITOR ON-COMING TRAIN TRAFFIC, AND ADVISE CONTRACTOR PERSONNEL WHEN ACTIVITY ON OR NEAR THE RAILROAD RIGHT-OF-WAY MAY PROCEED. THIS ITEM WILL BE PAID FOR ACCORDING TO ARTICLE 107.12 AND WILL BE REIMBURSED ACCORDING TO ARTICLE 109.05.



TYPICAL ALLEY RETURN DETAIL

FILE NAME: CITY OF BERWYN
EAST AVENUE
31st STREET TO CERMAK ROAD
RESURFACING

USER NAME: =
DESIGNED: AMS
DRAWN: JFP
PLOT SCALE: =
PLUG DATE: =

DATE: 2-1-13

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL CONSTRUCTION NOTES,
INDEX OF HIGHWAY STANDARDS, SPECIAL PROJECT NOTES,
MWRDGC NOTES, TYPICAL ALLEY RETURN DETAIL, BENCHMARKS

SCALE: NONE SHEET NO. OF SHEETS STA. TO STA.

Frank Novotny & Associates, Inc.
Civil Engineer
Professional Design Permit No. 184-000208

PAJ. RLE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2779	09-00167-00-RS	COOK	31	2
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			M-4003(087)	

Specialty Item	Special Provision	Code No	Description	Unit	Construction Code	
					Type 0005	
		20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD		1500
		20800150	TRENCH BACKFILL	CU YD		275
		21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD		100
		25000400	NITROGEN FERTILIZER NUTRIENT	POUND		15
		25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND		15
		25000600	POTASSIUM FERTILIZER NUTRIENT	POUND		15
		25200110	SODDING, SALT TOLERANT	SQ YD		1000
		25200200	SUPPLEMENTAL WATERING	UNIT		15
		28000500	INLET AND PIPE PROTECTION	EACH		55
		28000510	INLET FILTERS	EACH		55
		30103000	SHAPING AND GRADING ROADWAY	UNIT		45
	SP	30300001	AGGREGATE SUBGRADE IMPROVEMENT	CU YD		1500
		35501320	HOT-MIX ASPHALT BASE COURSE, 9"	SQ YD		16000
		40201000	AGGREGATE FOR TEMPORARY ACCESS	TON		200
		40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON		2500
		40600300	AGGREGATE (PRIME COAT)	TON		50
		40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON		20
		40600625	LEVELING BINDER (MACHINE METHOD), N50	TON		1550
		40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD		65
		40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON		2700
		42000300	PORTLAND CEMENT CONCRETE PAVEMENT 8"	SQ YD		475
		42300300	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT 7 INCH	SQ YD		300
		42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT		15000
		42400400	PORTLAND CEMENT CONCRETE SIDEWALK 7 INCH	SQ FT		300
		42400800	DETECTABLE WARNINGS	SQ FT		1275
		44000100	PAVEMENT REMOVAL	SQ YD		16500
		44000161	HOT-MIX ASPHALT SURFACE REMOVAL, 3"	SQ YD		7700
		44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD		300
		44000580	COMBINATION CURB AND GUTTER REMOVAL	FOOT		3800
		44000600	SIDEWALK REMOVAL	SQ FT		15300
		44201749	CLASS D PATCHES, TYPE I, 9 INCH	SQ YD		200
		44201753	CLASS D PATCHES, TYPE II, 9 INCH	SQ YD		200
		44201757	CLASS D PATCHES, TYPE III, 9 INCH	SQ YD		300
		44201759	CLASS D PATCHES, TYPE IV, 9 INCH	SQ YD		800
		44300100	AREA REFLECTIVE CRACK CONTROL TREATMENT	SQ YD		23000
*	SP	56500600	DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED	EACH		10
		60250200	CATCH BASINS TO BE ADJUSTED	EACH		55
		60252800	CATCH BASINS TO BE RECONSTRUCTED	EACH		1
		60255500	MANHOLES TO BE ADJUSTED	EACH		1
		60257900	MANHOLES TO BE RECONSTRUCTED	EACH		1
		60260100	INLETS TO BE ADJUSTED	EACH		1
		60265700	VALVE VAULTS TO BE ADJUSTED	EACH		1
		60266100	VALVE VAULTS TO BE RECONSTRUCTED	EACH		1

Specialty Item	Special Provision	Code No	Description	Unit	Construction Code	
					Type 0005	
		60266600	VALVE BOXES TO BE ADJUSTED	EACH		3
		60406000	FRAMES AND LIDS, TYPE 1, OPEN LID	EACH		5
		60406100	FRAMES AND LIDS, TYPE 1, CLOSED LID	EACH		15
		60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT		3800
		67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO		4
		67100100	MOBILIZATION	L SUM		1
		70300100	SHORT TERM PAVEMENT MARKING	FOOT		3000
		70300210	TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS	SQ FT		150
		70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT		9000
		70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT		2000
		70300250	TEMPORARY PAVEMENT MARKING - LINE 8"	FOOT		900
		70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT		1500
		70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT		400
		70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT		900
*		78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT		150
*		78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT		5650
*		78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT		900
*		78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT		1500
*		78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT		400
*	SP	78004354	PREFORMED PLASTIC PAVEMENT MARKING, TYPE D - INLAID - LINE 4"	FOOT		9000
*	SP	88600600	DETECTOR LOOP REPLACEMENT	FOOT		600
*	SP	X0324585	SANITARY SEWER SERVICE REMOVAL AND REPLACEMENT	EACH		16
		SP X0795800	COARSE AGGREGATE	TON		300
		SP X6030310	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)	EACH		70
		SP X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM		1
*	SP	X7810300	RECESSED REFLECTIVE PAVEMENT MARKER	EACH		295
*	SP	X8140115	HANDHOLE TO BE ADJUSTED	EACH		4
*	SP	X8140215	HEAVY-DUTY HANDHOLE TO BE ADJUSTED	EACH		1
		SP Z0016702	DETOUR SIGNING	L SUM		1
		SP Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT		50
		SP Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM		1
△	SP	Z0076600	TRAINEES	HOURL		500
△	SP	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOURL		500
*	SP	XX005535	SEWER SPOT REPAIRS, 12"	FOOT		50
*	SP	XX005536	SEWER SPOT REPAIRS, 15"	FOOT		60
*	SP	XX005537	SEWER SPOT REPAIRS, 18"	FOOT		40
*	SP	XX005541	CURED-IN-PLACE PIPE (CIPP), 12"	FOOT		200
*	SP	XX007689	PVC TEE, 12" X 6"	EACH		4
*	SP	XX007690	PVC TEE, 15" X 6"	EACH		6
*	SP	XX007691	PVC TEE, 18" X 6"	EACH		6
		SP XX007724	SOD STRIPPING, 2" DEPTH	SQ YD		675
*	SP	XX008867	SEWER SPOT REPAIRS, 20"	FOOT		260

△ Construction Code Type 0042

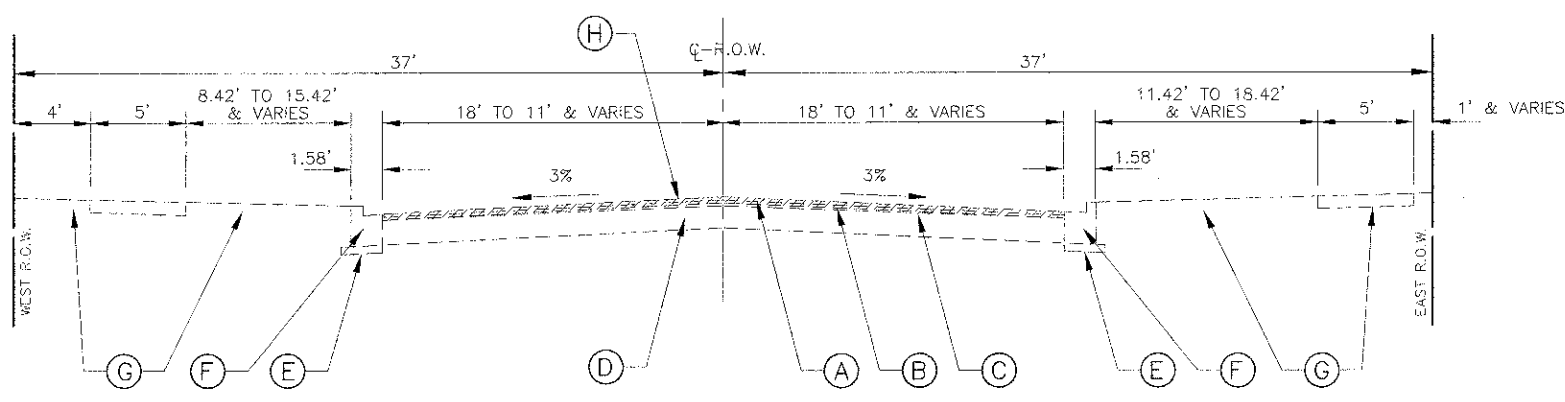
FILE NAME CITY OF BERWYN
EAST AVENUE
31st STREET TO CERMAK ROAD
RESURFACING

USER NAME =
DESIGNED -- AMS
DRAWN -- JFP
CHECKED -- JEF
DATE -- 2-1-13
REVISED -- JEF 3-13-13
REVISED -- JEF 4-5-13
REVISED --
REVISED --

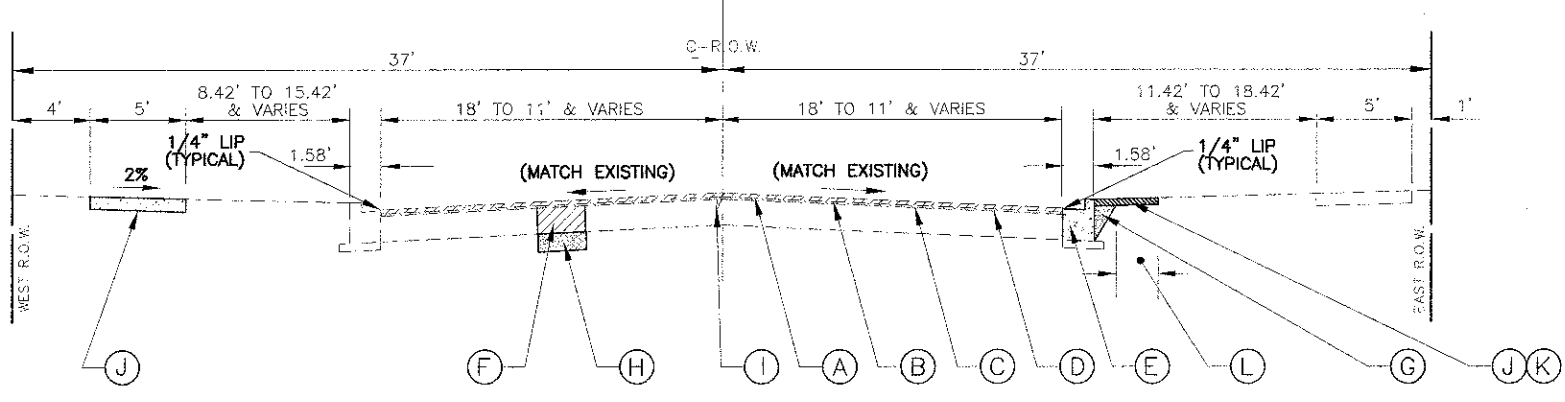
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
SCALE: NONE SHEET NO. OF SHEETS STA. TO STA.

Frank Novotny & Associates, Inc.
Civil Engineers
114-000108
F.A.U. SECTION COUNTY TOTAL SHEETS SHEET NO.
2779 09-00167-00-RS COOK 31 3
CONTRACT NO. 63837
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT M-4003(097)



EXISTING TYPICAL SECTION
 31st STREET TO VIADUCT
 STA. 46+69 TO STA. 53+12



PROPOSED TYPICAL SECTION
 31st STREET TO VIADUCT
 STA. 46+69 TO STA. 53+12
EAST AVENUE

NOTE:
 ALL "AREA REFLECTIVE CRACK CONTROL TREATMENT" SHALL HAVE A WEIGHT OF 6 OZ. PER SQUARE YARD.

EXISTING LEGEND

- (A) HOT-MIX ASPHALT SURFACE COURSE, 1 1/2"
 - (B) HOT-MIX ASPHALT BINDER COURSE, 1 1/2"
 - (C) LEVELING BINDER (1" AVG.) TO REMAIN
 - (D) HOT-MIX ASPHALT BASE COURSE, 8"
 - (E) SUBBASE GRANULAR MATERIAL, TYPE B, 4" TO REMAIN
 - (F) COMBINATION CONCRETE CURB & GUTTER TYPE B-6.12
 - (G) PORTLAND CEMENT CONCRETE DRIVEWAY, ALLEY RETURN, SIDEWALK, COURTESY WALK, CARRIAGE WALK, AND GRASS PARKWAY
 - (H) PROPOSED "HOT-MIX ASPHALT SURFACE REMOVAL, 3 INCH", (FULL WIDTH)
- ▨ INDICATES REMOVAL ITEM

NOTE: CONTRACTOR SHALL MILL BEFORE PATCHING.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	AIR VOIDS @ NDES
PAVEMENT RESURFACING	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, (IL-9.5mm), 2"	4% @ 50 GYR
LEVELING BINDER (MACHINE METHOD), N50, 1"	4% @ 50 GYR
PATCHING	
CLASS D PATCH, (HMA BINDER IL-19 mm), 9" (IN 3 LIFTS)	4% @ 70 GYR

THE UNIT WEIGHT TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.
 "THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS"
 FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS

PROPOSED LEGEND

- (A) "HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50", 2 INCH
- (B) "AREA REFLECTIVE CRACK CONTROL TREATMENT" (6 OZ.) BETWEEN LEVELING BINDER AND SURFACE COURSE
- (C) "LEVELING BINDER (MACHINE METHOD), N50," 1 INCH
- (D) "AGGREGATE (PRIME COAT)" AT A RATE OF 2 LBS/SY OVER "BITUMINOUS MATERIALS (PRIME COAT)" AT 0.10 GAL/S.Y.
- (E) "COMBINATION CURB AND GUTTER REMOVAL" AND "COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12" AS SHOWN ON PLANS AND CONSTRUCTED ADJACENT TO EXISTING "HOT-MIX ASPHALT BASE COURSE", 8"
- (F) "CLASS D PATCHES, TYPE I-IV, 9 INCH"- (IN 3 LIFTS) AS DIRECTED AT LOCATIONS BY THE ENGINEER
- (G) "COARSE AGGREGATE" BACKFILL BENEATH SIDEWALK
- (H) "AGGREGATE SUBGRADE IMPROVEMENT" AND "REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL"- AS DIRECTED AT LOCATIONS BY THE ENGINEER
- (I) "MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS" AS APPLICABLE
- (J) "SIDEWALK REMOVAL" AND "PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH" AS SHOWN ON PLANS
- (K) "SODDING, SALT TOLERANT" AND "TOPSOIL FURNISH AND PLACE, 4 INCH" (2' WIDTH MAX.)
- (L) "SOD STRIPPING, 2 INCH DEPTH" (1.5' WIDTH MAX.)

IMPORTANT!
 FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES INDICATED IN TITLE BLOCK.

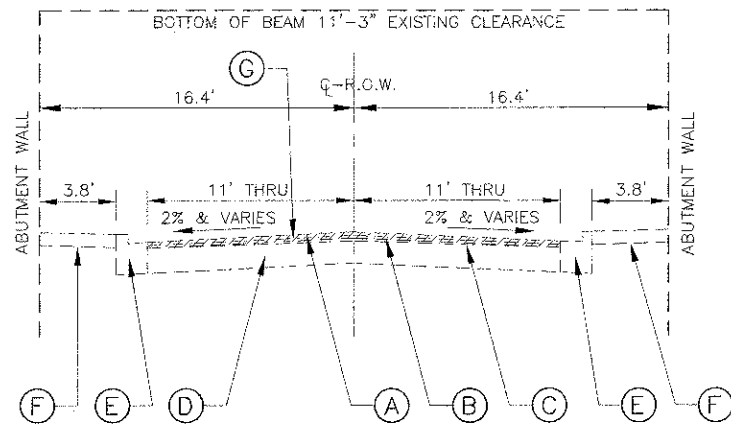
Frank Novotny & Associates, Inc.
 Civil Engineers
 805 Midway Drive • Wheeling, IL • 815/777-7777 • Telephone: (800) 887-8640 • Fax: (800) 887-0130
 ILLINOIS PROFESSIONAL DESIGN FIRM NO. 184-00068

FILE NAME CITY OF BERWYN EAST AVENUE 31st STREET TO CERMAK ROAD RESURFACING	USER NAME =	DESIGNED - AMS DRAWN - JFP CHECKED - JFP DATE - 2-1-13	REVISED - JEF 3-13-13 REVISED - JEF 4-5-13
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS & HOT-MIX ASPHALT MIXTURE REQUIREMENTS	
SCALE: 1"=5'	SHEET NO. OF SHEETS STA. TO STA.

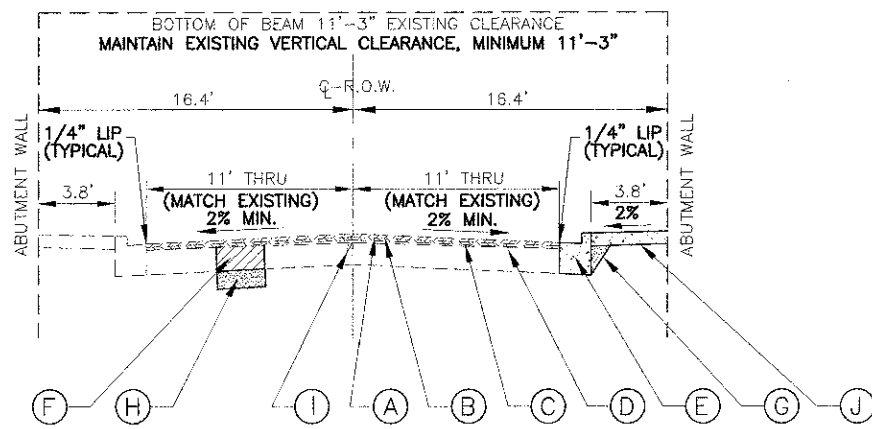
F.A.U. RT# 2779	SECTION 09-00167-00-RS	COUNTY COOK	TOTAL SHEETS 31	SHEET NO. 4
CONTRACT NO. 63837			ILLINOIS FED. AID PROJECT M-4003(087)	



EXISTING TYPICAL SECTION

UNDER VIADUCT

STA. 53+12 TO STA. 54+20 (EAST SIDE OF STREET)
 STA. 53+17 TO STA. 54+26 (WEST SIDE OF STREET)



NOTE:
 ALL "AREA REFLECTIVE CRACK CONTROL TREATMENT"
 SHALL HAVE A WEIGHT OF 6 OZ. PER SQUARE YARD.

PROPOSED TYPICAL SECTION

UNDER VIADUCT

STA. 53+12 TO STA. 54+20 (EAST SIDE OF STREET)
 STA. 53+17 TO STA. 54+26 (WEST SIDE OF STREET)

EAST AVENUE

EXISTING LEGEND

- (A) HOT-MIX ASPHALT SURFACE COURSE, 1 1/2"
 - (B) HOT-MIX ASPHALT BINDER COURSE, 1 1/2"
 - (C) LEVELING BINDER (1" AVG.) TO REMAIN
 - (D) HOT-MIX ASPHALT BASE COURSE, 8"
 - (E) COMBINATION CONCRETE CURB & GUTTER TYPE B-6.12
 - (F) PORTLAND CEMENT CONCRETE SIDEWALK AND EXISTING BRIDGE ABUTMENT (STA. 53+17 TO STA. 54+26, WEST SIDE AND STA. 53+12 TO STA. 54+20, EAST SIDE)
 - (G) PROPOSED "HOT-MIX ASPHALT SURFACE REMOVAL, 3 INCH", (FULL WIDTH)
- ▨ INDICATES REMOVAL ITEM

NOTE: CONTRACTOR SHALL MILL BEFORE PATCHING.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	AIR VOIDS @ NDES
PAVEMENT RESURFACING	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, (IL-9.5mm), 2"	4% @ 50 GYR
LEVELING BINDER (MACHINE METHOD), N50, 1"	4% @ 50 GYR
PATCHING	
CLASS D PATCH, (HMA BINDER IL-19 mm), 9" (IN 3 LIFTS)	4% @ 70 GYR

THE UNIT WEIGHT TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.

"THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS"
 FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS

PROPOSED LEGEND

- (A) "HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50", 2 INCH
- (B) "AREA REFLECTIVE CRACK CONTROL TREATMENT" (6 OZ.) BETWEEN LEVELING BINDER AND SURFACE COURSE
- (C) "LEVELING BINDER (MACHINE METHOD), N50," 1 INCH
- (D) "AGGREGATE (PRIME COAT)" AT A RATE OF 2 LBS/SY OVER "BITUMINOUS MATERIALS (PRIME COAT)" AT 0.10 GAL/S.Y.
- (E) "COMBINATION CURB AND GUTTER REMOVAL" AND "COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12" AS SHOWN ON PLANS AND CONSTRUCTED ADJACENT TO EXISTING "HOT-MIX ASPHALT BASE COURSE", 8"
- (F) "CLASS D PATCHES, TYPE I-IV, 9 INCH"- (IN 3 LIFTS) AS DIRECTED AT LOCATIONS BY THE ENGINEER
- (G) "COARSE AGGREGATE" BACKFILL BENEATH SIDEWALK
- (H) "AGGREGATE SUBGRADE IMPROVEMENT" AND "REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL"- AS DIRECTED AT LOCATIONS BY THE ENGINEER
- (I) "MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS"
- (J) "SIDEWALK REMOVAL" AND "PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH" AS SHOWN ON PLANS

IMPORTANT!

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES INDICATED IN TITLE BLOCK.

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 ILLINOIS PROFESSIONAL DESIGN FIRM NO. 194-00028

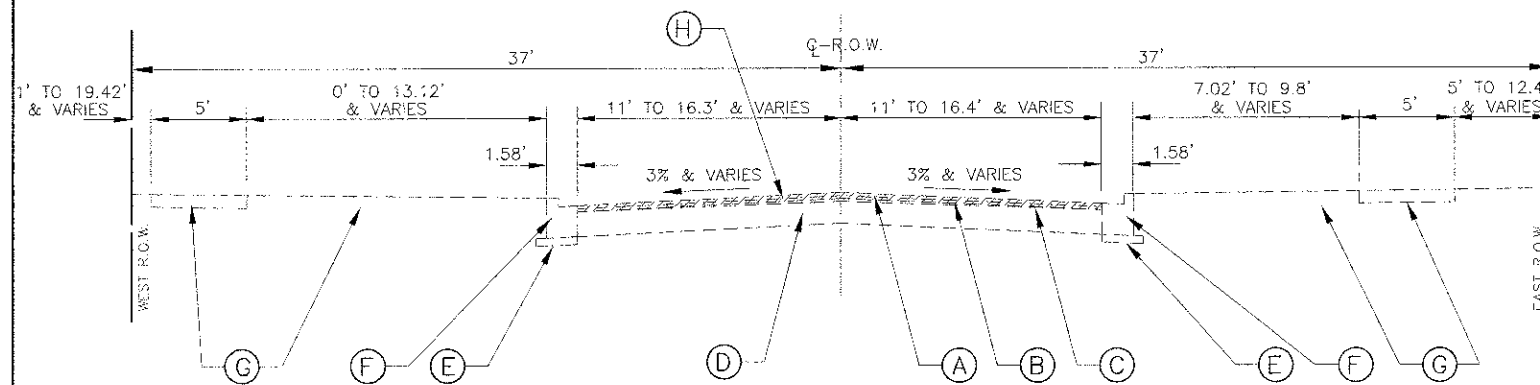
FILE NAME CITY OF BERWYN EAST AVENUE 31st STREET TO CERMAK ROAD RESURFACING	USER NAME AMS	DESIGNED AMS	REVISED JEF 3-13-13
	PLLOT SCALE 1"=5'	CHECKED JCF	REVISED JEF 4-8-13
	PLLOT DATE 2-1-13	DATE 2-1-13	REVISED

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS &
 HOT-MIX ASPHALT MIXTURE REQUIREMENTS**

SCALE: 1"=5' SHEET NO. OF SHEETS TO STA. TO STA.

P.A. J. RITE 2779	SECTION 09-00167-00-RS	COUNTY COOK	TOTAL SHEETS 31	SHEET NO. 5
CONTRACT NO. 63837				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT M-4003(087)				



EXISTING TYPICAL SECTION
VIADUCT TO SOUTH OF 28th PLACE
STA. 54+20 TO STA. 55+60

EXISTING LEGEND

- (A) HOT-MIX ASPHALT SURFACE COURSE, 1 1/2"
 - (B) HOT-MIX ASPHALT BINDER COURSE, 1 1/2"
 - (C) LEVELING BINDER (1" AVG.) TO REMAIN
 - (D) HOT-MIX ASPHALT BASE COURSE, 8"
 - (E) SUBBASE GRANULAR MATERIAL, TYPE B, 4" TO REMAIN
 - (F) COMBINATION CONCRETE CURB & GUTTER TYPE B-6.12
 - (G) PORTLAND CEMENT CONCRETE ALLEY RETURN, SIDEWALK, COURTESY WALK AND GRASS PARKWAY
 - (H) PROPOSED "HOT-MIX ASPHALT SURFACE REMOVAL, 3 INCH", (FULL WIDTH)
- ▨ INDICATES REMOVAL ITEM

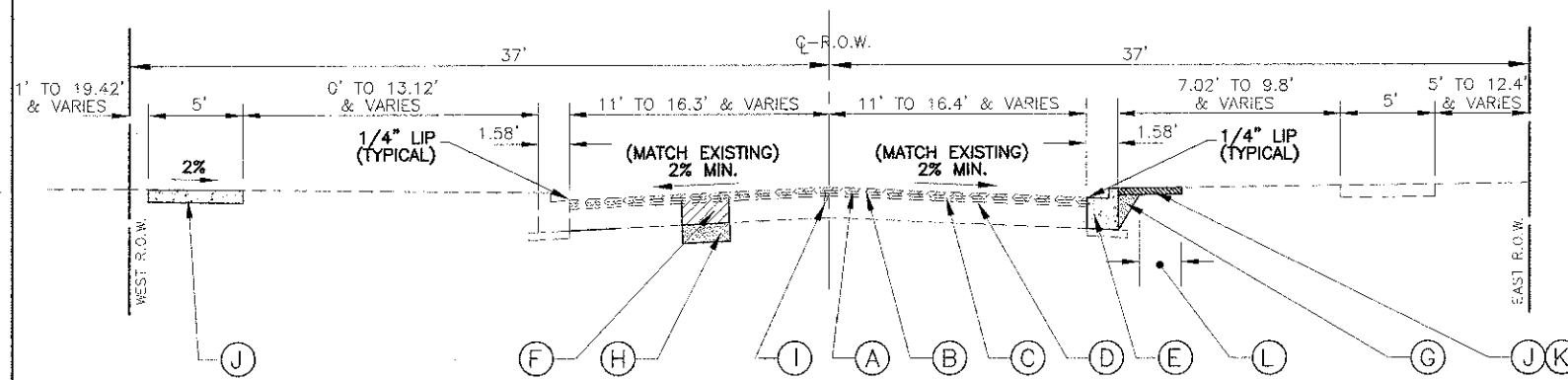
NOTE: CONTRACTOR SHALL MILL BEFORE PATCHING.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	AIR VOIDS @ NDES
PAVEMENT RESURFACING	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, (IL-9.5mm), 2"	4% @ 50 GYR
LEVELING BINDER (MACHINE METHOD), N50, 1"	4% @ 50 GYR
PATCHING	
CLASS D PATCH, (HMA BINDER IL-19 mm), 9" (IN 3 LIFTS)	4% @ 70 GYR

THE UNIT WEIGHT TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.

"THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS"
FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS



NOTE:
ALL "AREA REFLECTIVE CRACK CONTROL TREATMENT" SHALL HAVE A WEIGHT OF 6 OZ. PER SQUARE YARD.

PROPOSED TYPICAL SECTION
VIADUCT TO SOUTH OF 28th PLACE
STA. 54+20 TO STA. 55+60
EAST AVENUE

PROPOSED LEGEND

- (A) "HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50", 2 INCH
- (B) "AREA REFLECTIVE CRACK CONTROL TREATMENT" (6 OZ.) BETWEEN LEVELING BINDER AND SURFACE COURSE
- (C) "LEVELING BINDER (MACHINE METHOD), N50," 1 INCH
- (D) "AGGREGATE (PRIME COAT)" AT A RATE OF 2 LBS/SY OVER "BITUMINOUS MATERIALS (PRIME COAT)" AT 0.10 GAL/S.Y.
- (E) "COMBINATION CURB AND GUTTER REMOVAL" AND "COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12" AS SHOWN ON PLANS AND CONSTRUCTED ADJACENT TO EXISTING "HOT-MIX ASPHALT BASE COURSE", 8"
- (F) "CLASS D PATCHES, TYPE I-IV, 9 INCH"- (IN 3 LIFTS) AS DIRECTED AT LOCATIONS BY THE ENGINEER
- (G) "COARSE AGGREGATE" BACKFILL BENEATH SIDEWALK
- (H) "AGGREGATE SUBGRADE IMPROVEMENT" AND "REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL"- AS DIRECTED AT LOCATIONS BY THE ENGINEER
- (I) "MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS" AS APPLICABLE
- (J) "SIDEWALK REMOVAL" AND "PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH" AS SHOWN ON PLANS
- (K) "SODDING, SALT TOLERANT" AND "TOPSOIL FURNISH AND PLACE, 4 INCH" (2' WIDTH MAX.)
- (L) "SOD STRIPPING, 2 INCH DEPTH" (1.5' WIDTH MAX.)

IMPORTANT!
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES INDICATED IN TITLE BLOCK.

Frank Novotny & Associates, Inc.
Civil Engineer
385 Midway Drive • Wheeling, IL • 60091 • Telephone: (815) 887-0640 • Fax: (815) 887-0132
ILLINOIS PROFESSIONAL DESIGN FIRM NO. 184-000968

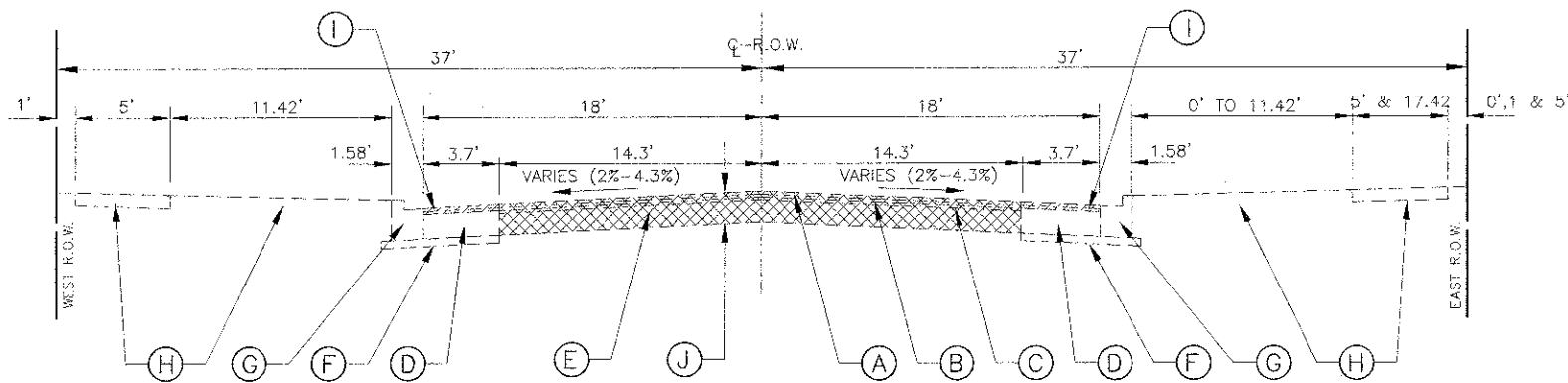
P.A.L. H.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2779	09-00167-00-RS	COOK	31	6
CONTRACT NO. 63837				
REG. ROAD DIST. NO. ILLINOIS FED. AID PROJECT M-4003(087)				

FILE NAME	CITY OF BERWYN	USER NAME	DESIGNED - AMS	REVISED - JEF 3-13-13
	EAST AVENUE		DRAWN - JFP	REVISED - JEF 4-5-13
	31st STREET TO CERMAK ROAD		CHECKED - JEF	REVISED -
	RESURFACING		DATE - 2-1-13	REVISED -

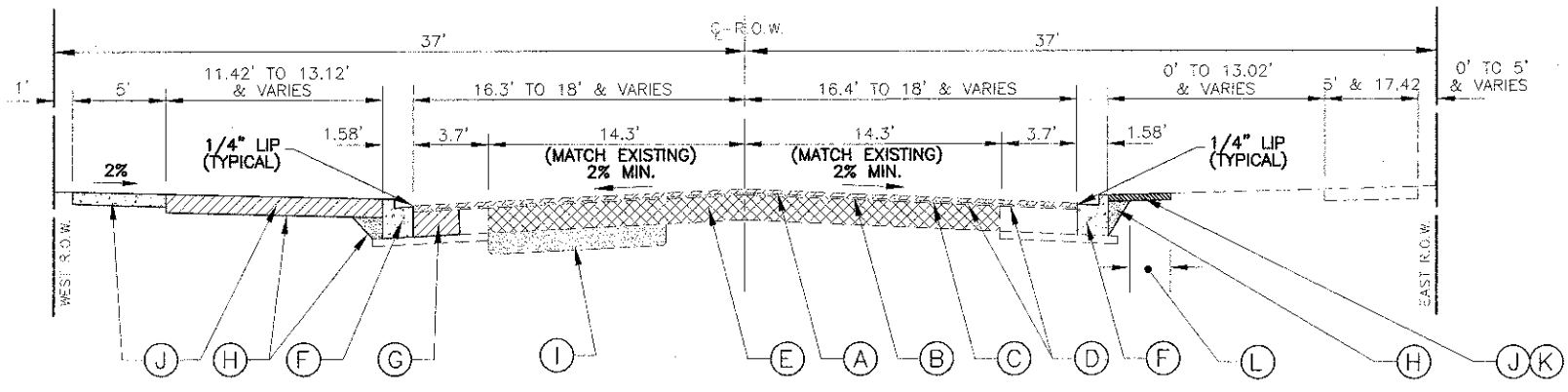
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS &
HOT-MIX ASPHALT MIXTURE REQUIREMENTS

SCALE: 1" = 5' SHEET NO. OF SHEETS STA. TO STA.



EXISTING TYPICAL SECTION
 SOUTH OF 28th PLACE TO CERMAK ROAD
 STA. 55+60 TO STA. 73+47
 STA. 75+53 TO STA. 98+27



NOTE:
 ALL "AREA REFLECTIVE CRACK CONTROL TREATMENT"
 SHALL HAVE A WEIGHT OF 6 OZ. PER SQUARE YARD.

PROPOSED TYPICAL SECTION
 SOUTH OF 28th PLACE TO CERMAK ROAD
 STA. 55+60 TO STA. 73+47
 STA. 75+53 TO STA. 98+27

EAST AVENUE

EXISTING LEGEND

- (A) HOT-MIX ASPHALT SURFACE COURSE, 1 1/2"
- (B) HOT-MIX ASPHALT BINDER COURSE, 1 1/2"
- (C) LEVELING BINDER (1" AVG.)
- (D) HOT-MIX ASPHALT BASE COURSE WIDENING, 9"
- (E) POZZOLANIC BASE, 8"
- (F) SUBBASE GRANULAR MATERIAL, TYPE B, 4" TO REMAIN
- (G) COMBINATION CONCRETE CURB & GUTTER TYPE B-6.12
- (H) PORTLAND CEMENT CONCRETE DRIVEWAY, ALLEY RETURN, SIDEWALK, COURTESY WALK, CARRIAGE WALK, HOT-MIX ASPHALT SURFACE DRIVEWAY, AND GRASS PARKWAY
- (I) PROPOSED "HOT-MIX ASPHALT SURFACE REMOVAL, 3 INCH",
 [Hatched pattern] INDICATES "HOT-MIX ASPHALT SURFACE REMOVAL, 3 INCH" ITEM
- NOTE:** SURFACE REMOVAL SHALL COMMENCE ONLY AFTER PLACEMENT OF "HOT-MIX ASPHALT BASE COURSE, 9 INCH" IN "PAVEMENT REMOVAL" AREA IS COMPLETED.
- (J) PROPOSED "PAVEMENT REMOVAL"
 [Cross-hatched pattern] INDICATES "PAVEMENT REMOVAL" ITEM
- NOTE:** CONTRACTOR SHALL MILL BEFORE PATCHING.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	AIR VOIDS @ NDES
PAVEMENT RESURFACING	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, (IL-9.5mm), 2"	4% @ 50 GYR
LEVELING BINDER (MACHINE METHOD), N50, 1"	4% @ 50 GYR
PAVEMENT RECONSTRUCTION	
HOT-MIX ASPHALT BASE COURSE, (HMA BINDER IL-19 mm), 9"	4% @ 50 GYR
PATCHING	
CLASS D PATCH, (HMA BINDER IL-19 mm), 9" (IN 3 LIFTS)	4% @ 70 GYR

THE UNIT WEIGHT TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.
 THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS
 FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS

PROPOSED LEGEND

- (A) "HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50", 2 INCH
- (B) "AREA REFLECTIVE CRACK CONTROL TREATMENT" (6 OZ.) BETWEEN LEVELING BINDER AND SURFACE COURSE
- (C) "LEVELING BINDER (MACHINE METHOD), N50," 1 INCH
- (D) "AGGREGATE (PRIME COAT)" AT A RATE OF 2 LBS/SY OVER "BITUMINOUS MATERIALS (PRIME COAT)" AT 0.10 GAL/S.Y.
- (E) "HOT-MIX ASPHALT BASE COURSE, 9 INCH", (IN 3 LIFTS)
- (F) "COMBINATION CURB AND GUTTER REMOVAL" AND "COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12" AS SHOWN ON PLANS AND CONSTRUCTED ADJACENT TO EXISTING HOT-MIX ASPHALT BASE COURSE WIDENING, 9"
- (G) "CLASS D PATCHES, TYPE I-IV, 9 INCH"- (IN 3 LIFTS) AS DIRECTED AT LOCATIONS BY THE ENGINEER
- (H) "COARSE AGGREGATE" BACKFILL AND AS REQUIRED
- (I) "AGGREGATE SUBGRADE IMPROVEMENT" AND "REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL"- AS DIRECTED AT LOCATIONS BY THE ENGINEER
AS APPLICABLE
- (J) "SIDEWALK REMOVAL" AND "PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH" OR "DRIVEWAY PAVEMENT REMOVAL" AND REPLACEMENT WITH "PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 7 INCH" OR "PAVEMENT REMOVAL" AND "PORTLAND CEMENT CONCRETE PAVEMENT, 8 INCH" AS SHOWN ON PLANS
- (K) "SODDING, SALT TOLERANT" AND "TOPSOIL FURNISH AND PLACE, 4 INCH" (2' WIDTH MAX.)
- (L) "SOD STRIPPING, 2 INCH DEPTH" (1.5' WIDTH MAX.)

IMPORTANT!
 FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES INDICATED IN TITLE BLOCK.

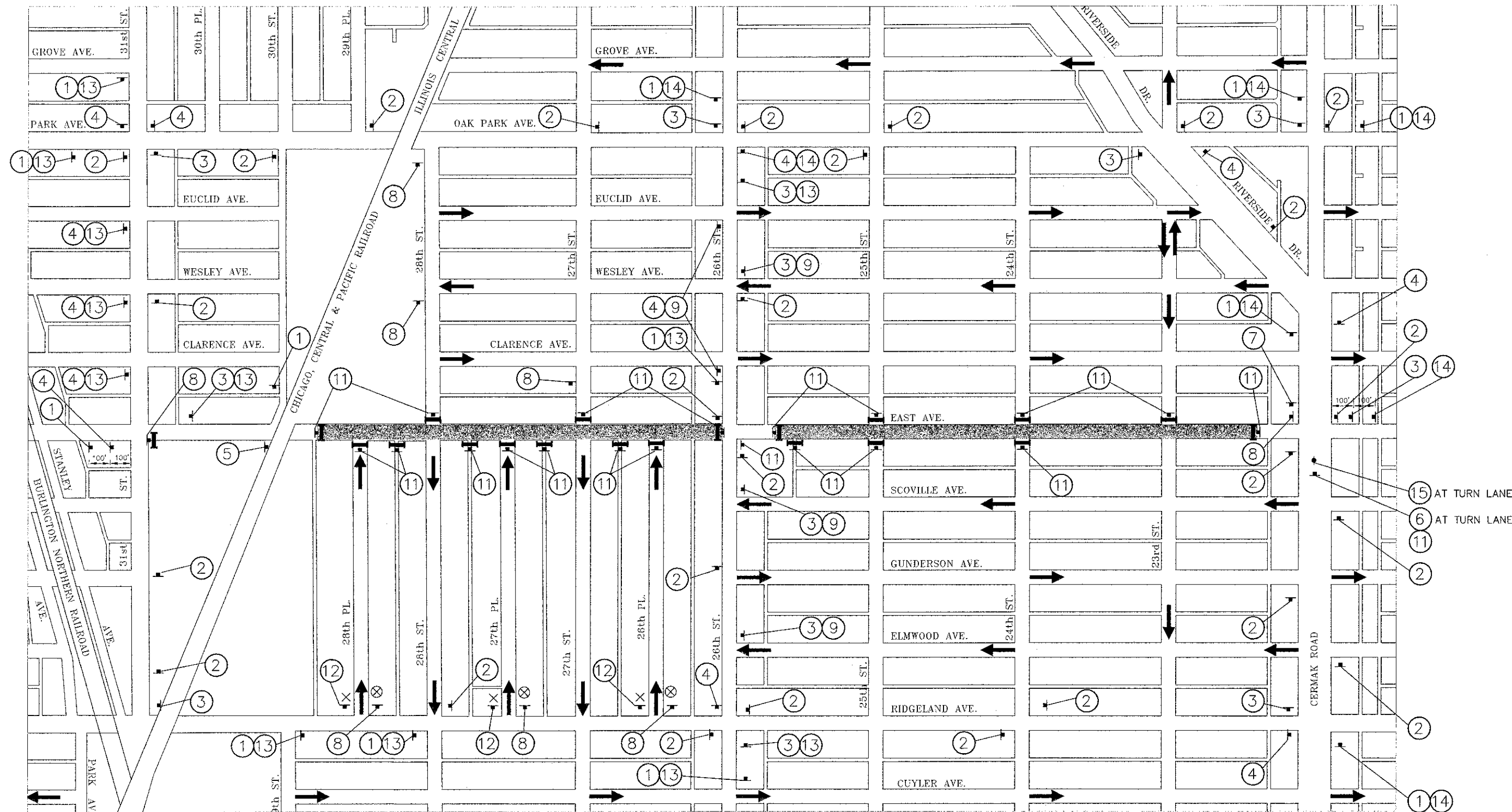
Frank Novotny & Associates, Inc.
 825 Midway Drive • Wheeling, IL • 60097 • Telephone (815) 887-9840 • Fax (815) 887-0129
 ILLINOIS PROFESSIONAL DESIGN FIRM NO. 194-000005

FILE NAME	CITY OF BERWYN EAST AVENUE 31st STREET TO CERMAK ROAD RESURFACING	USER NAME	DESIGNED - AMS DRAWN - JHP CHECKED - JFP DATE - 2-1-13	REVISED - JEF 3-13-13 REVISED - JEF 4-5-13 REVISED - REVISED -
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

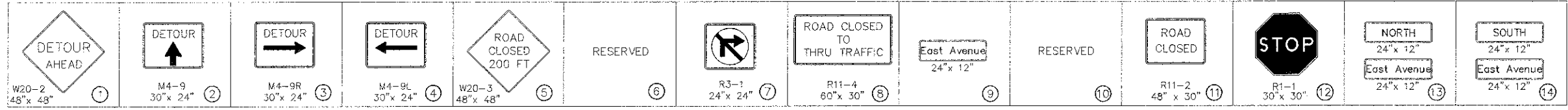
TYPICAL SECTIONS & HOT-MIX ASPHALT MIXTURE REQUIREMENTS	
SCALE: 1"=5'	SHEET NO. OF SHEETS
STA. TO STA.	

F.A.U. NO. 2779	SECTION 09-00167-00-RS	COUNTY COOK	TOTAL SHEETS 31	SHEET NO. 7
FED. ROAD DIST. NO. ILLINOIS		FED. AID PROJECT M-4003(087)		



- LEGEND**
- SIGNS (122 REQUIRED)
 - TYPE III BARRICADES (20 LOCATIONS)
 - LIMITS OF PAVEMENT REMOVAL AND HOT-MIX ASPHALT BASE COURSE CONSTRUCTION
 - ← TRAFFIC FLOW
 - TYPE II BARRICADES W/ STEADY BURNING LIGHTS
 - ⊗ EXISTING ONE WAY SIGN TO BE "BAGGED" DURING DETOUR CLOSURE
 - ⊗ EXISTING DO NOT ENTER SIGN TO BE "BAGGED" DURING DETOUR CLOSURE

TRAFFIC CONTROL SIGNS



NOTE: THE COST OF PROVIDING INSTALLING AND MAINTAINING ALL TRAFFIC CONTROL, TEMPORARY SIGNAGE AND DETOUR ROUTE SIGNAGE SHALL BE INCLUDED AND PAID FOR IN THE ITEM "DETOUR SIGNING".

NOTE: TRAFFIC CONTROL, TEMPORARY SIGNAGE AND DETOUR ROUTE TO BE INSTALLED AND MAINTAINED FOR THE PAVEMENT REMOVAL AND HOT-MIX ASPHALT BASE COURSE CONSTRUCTION ONLY.

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 ILLINOIS PROFESSIONAL DESIGN FIRM NO. 184-00928

FILE NAME: CITY OF BERWYN
 EAST AVENUE
 31st STREET TO CERMAK ROAD
 RESURFACING

USER NAME: —
 DESIGNED: — AMS
 DRAWN: — JFP
 CHECKED: — JEF
 PLOT DATE: —

REVISED: — JEF 3-13-13
 REVISED: —
 REVISED: — JEF
 DATE: — 2-1-13
 REVISED: —

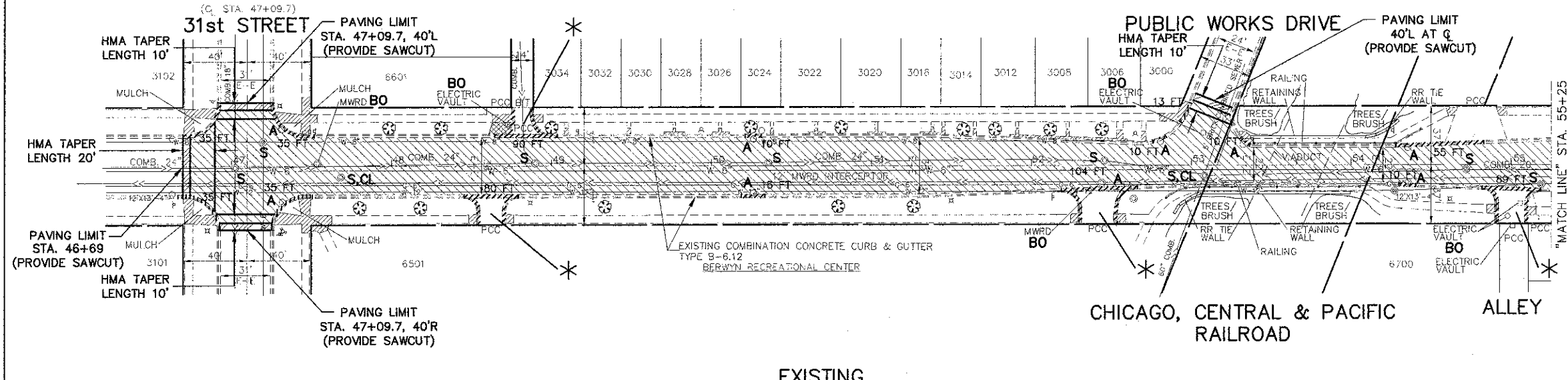
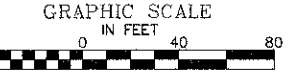
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL & DETOUR PLAN
 SCALE: NONE SHEET NO. OF SHEETS STA. TO STA.

F.A.U. NO.	SECTION	COUNTY	TOTAL SHEETS
2779	09-00167-00-RS	COOK	31
			NO.
			8
CONTRACT NO. 63837			
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT M-4003(087)			

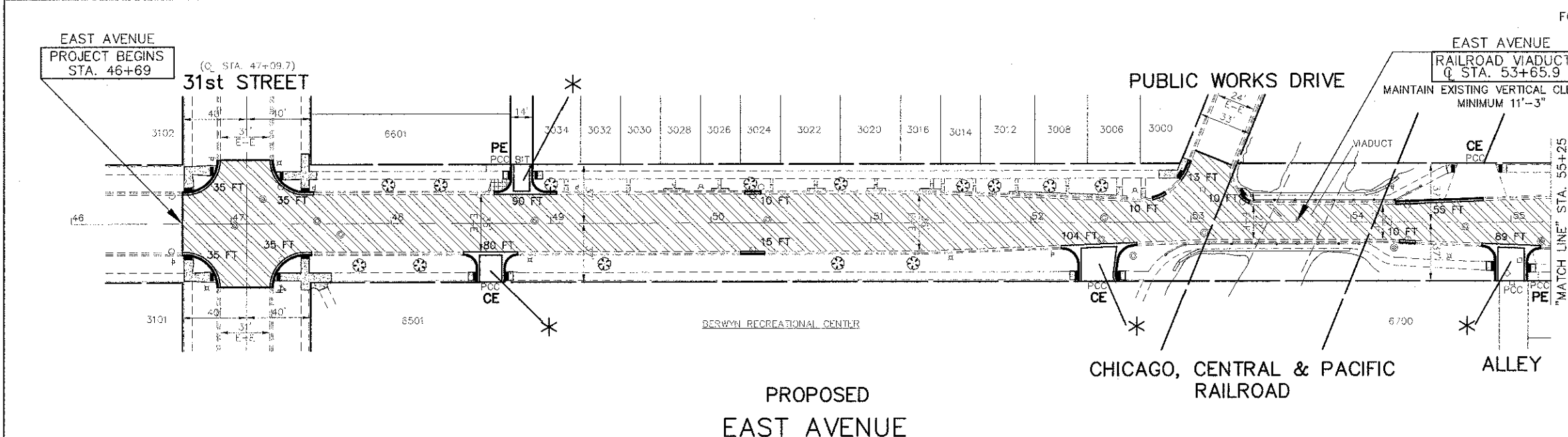


1"=40'



- REMOVAL LEGEND**
- DENOTES HOT-MIX ASPHALT SURFACE REMOVAL-BUTT JOINT
 - DENOTES HOT-MIX ASPHALT SURFACE REMOVAL, 3 INCH. SURFACE REMOVAL SHALL COMMENCE ONLY AFTER PLACEMENT OF HOT-MIX ASPHALT BASE COURSE, 9 INCH IN PAVEMENT REMOVAL AREA IS COMPLETED.
 - DENOTES PAVEMENT REMOVAL
 - DENOTES DRIVEWAY PAVEMENT REMOVAL
 - DENOTES SIDEWALK REMOVAL
 - DENOTES COMBINATION CURB AND GUTTER REMOVAL
 - "A"** DENOTES EXISTING VALVE VAULTS, VALVE BOXES, INLETS, CATCH BASINS AND MANHOLES TO BE ADJUSTED
 - "BO"** DENOTES EXISTING TO BE ADJUSTED (BY OTHERS)
 - "S"** DENOTES EXISTING FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)
 - "OL"** DENOTES NEW FRAMES AND LIDS, TYPE I, OPEN LID
 - "CL"** DENOTES NEW FRAMES AND LIDS, TYPE I, CLOSED LID
 - "R"** DENOTES EXISTING VALVE VAULTS TO BE RECONSTRUCTED
 - *** DENOTES ALLEY RETURN OR DRIVEWAY TO BE REMOVED WITH PAVEMENT REMOVAL

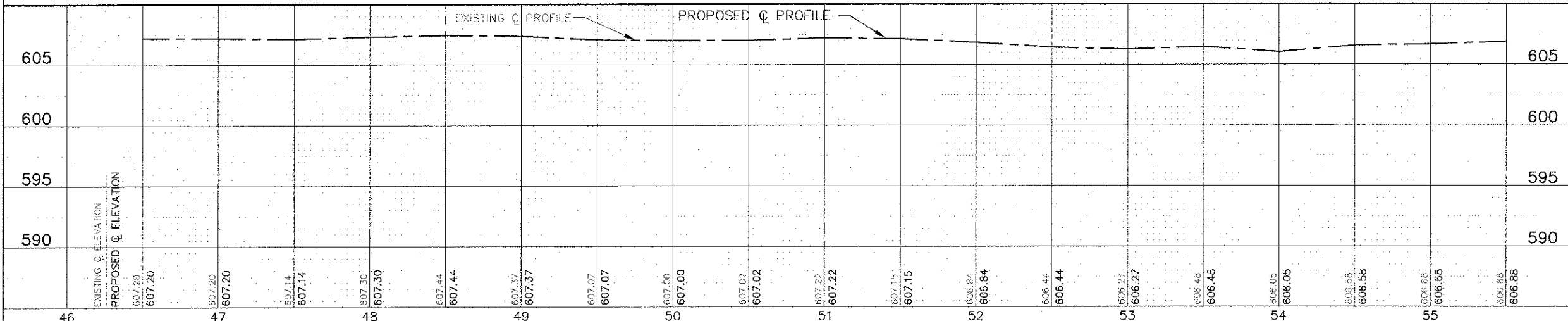
EXISTING



FOR CONTINUATION SEE SHEET 10

- PROPOSED PAVEMENT LEGEND**
- DENOTES LEVELING BINDER (MACHINE METHOD), N50, 1 INCH AND AREA REFLECTIVE CRACK CONTROL TREATMENT (6 OZ.) BETWEEN LEVELING BINDER AND SURFACE COURSE AND, HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, 2 INCH, CLASS D PATCHES, 9 INCH. SEE TYPICAL SECTIONS
 - DENOTES HOT-MIX ASPHALT BASE COURSE, 9 INCH. SEE TYPICAL SECTIONS
 - DENOTES PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 7 INCH (PE)
 - DENOTES PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH (PORTLAND CEMENT CONCRETE SIDEWALK, 7 INCH AT PE DRIVEWAYS)
 - DENOTES COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
 - DENOTES PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH WITH DETECTABLE WARNINGS PER I.D.C.T. STANDARDS FOR HANDICAP RAMPS (WHERE APPLICABLE) SEE CONSTRUCTION HIGHWAY STANDARDS
 - PE** DENOTES PRIVATE ENTRANCE
 - CE** DENOTES COMMERCIAL ENTRANCE
 - *** DENOTES PORTLAND CEMENT CONCRETE PAVEMENT, 8 INCH

PROPOSED EAST AVENUE



ALL SAW CUTS SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEM BEING REMOVED.

FOR TYPICAL SECTIONS OF NEW PAVEMENT WORK SEE SHEET 4, 5 & 6

IMPORTANT!
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES INDICATED IN TITLE BLOCK.

Frank Novotny & Associates, Inc.
Civil Engineers
1835 Midway Drive • Willowbrook, IL • 60527 • Telephone: (630) 857-8944 • Fax: (630) 857-0120
ILLINOIS PROFESSIONAL DESIGN PERM NO. 184-000028

FILE NAME: CITY OF BERWYN
EAST AVENUE
31st STREET TO CERMAK ROAD
RESURFACING

USER NAME: JEF
DESIGNED: AMS
DRAWN: JFP
CHECKED: JEF
DATE: 2-1-13

DESIGNED: AMS
DRAWN: JFP
CHECKED: JEF
DATE: 2-1-13

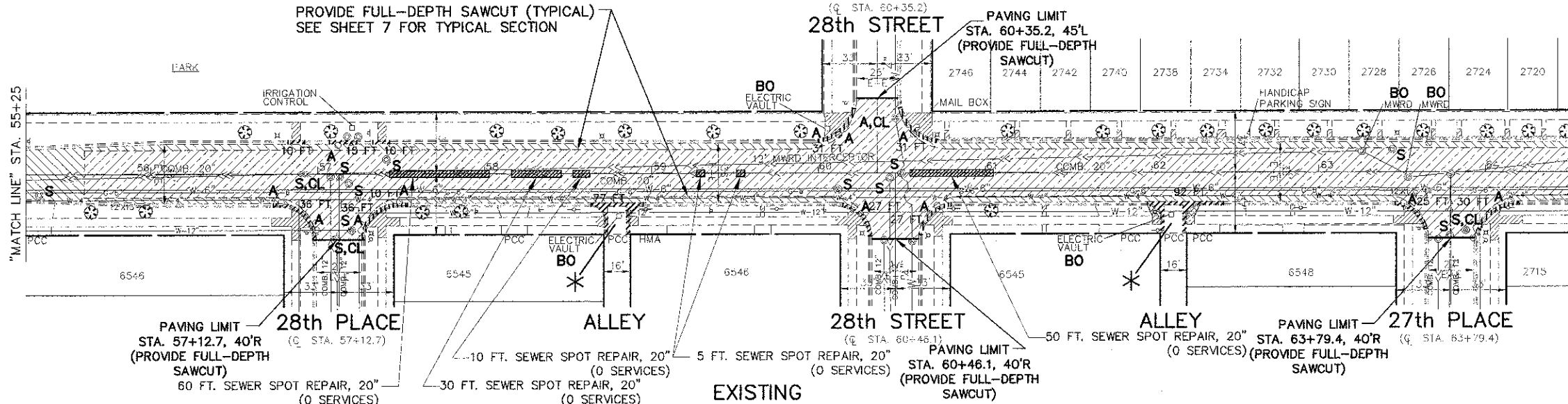
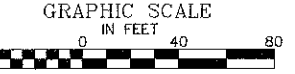
REVISOR: JEF 3-13-13
REVISOR: JEF 4-5-13

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLAN & PROFILE: EAST AVENUE - 31st STREET TO STA. 55+25
(RESURFACING AND RECONSTRUCTION)

SCALE: 1"=40' SHEET NO. OF SHEETS STA. TO STA.
F.A.U. NO. 2779 SECTION 09-00167-00-RS COUNTY COOK SHEETS NO. 31 9 CONTRACT NO. 63837
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT M-4003(087)



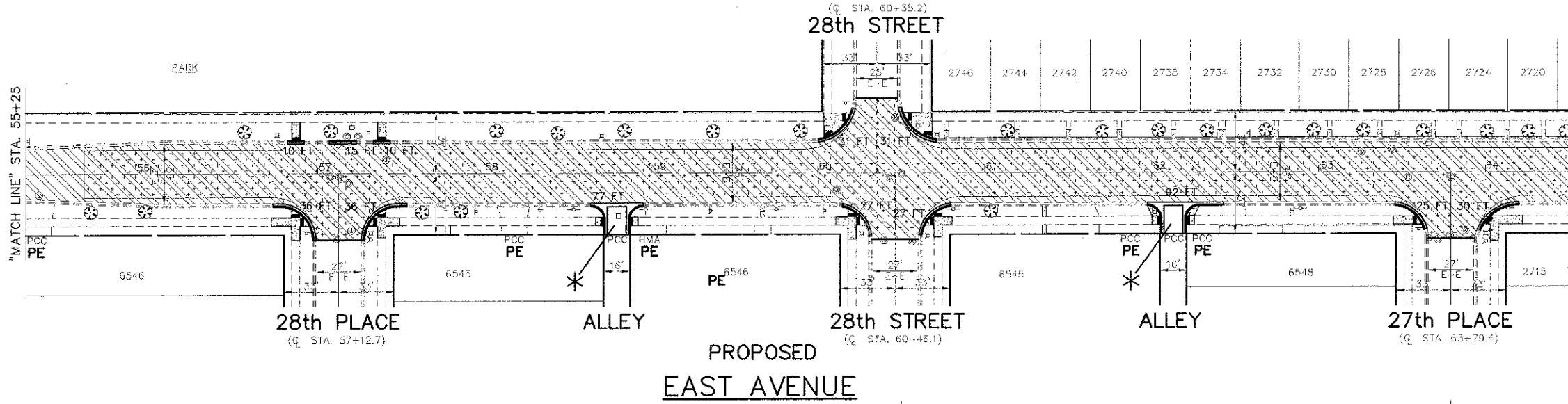
1"=40'



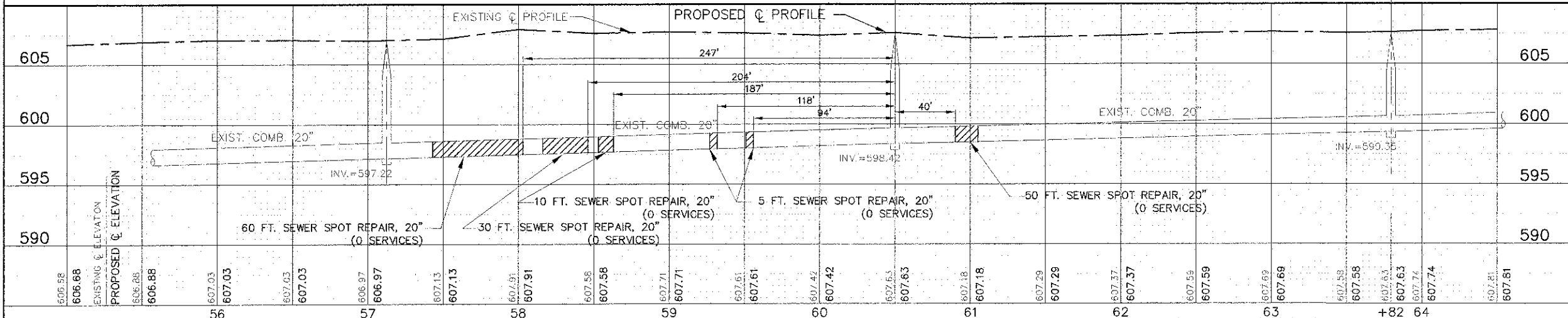
- REMOVAL LEGEND**
- DENOTES HOT-MIX ASPHALT SURFACE REMOVAL--BUTT JOINT
 - DENOTES HOT-MIX ASPHALT SURFACE REMOVAL, 3 INCH. (0' TO 3.7' WIDTH & VARIES) SURFACE REMOVAL SHALL COMMENCE ONLY AFTER PLACEMENT OF HOT-MIX ASPHALT BASE COURSE, 9 INCH IN PAVEMENT REMOVAL AREA IS COMPLETED.
 - DENOTES PAVEMENT REMOVAL
 - DENOTES DRIVEWAY PAVEMENT REMOVAL
 - DENOTES SIDEWALK REMOVAL
 - DENOTES COMBINATION CURB AND GUTTER REMOVAL
 - "A"** DENOTES EXISTING VALVE VAULTS, VALVE BOXES, INLETS, CATCH BASINS AND MANHOLES TO BE ADJUSTED
 - "BO"** DENOTES EXISTING TO BE ADJUSTED (BY OTHERS)
 - "S"** DENOTES EXISTING FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)
 - "OL"** DENOTES NEW FRAMES AND LIDS, TYPE I, OPEN LID
 - "CL"** DENOTES NEW FRAMES AND LIDS, TYPE I, CLOSED LID
 - "R"** DENOTES EXISTING VALVE VAULTS TO BE RECONSTRUCTED
 - *** DENOTES ALLEY RETURN OR DRIVEWAY TO BE REMOVED WITH PAVEMENT REMOVAL

FOR CONTINUATION SEE SHEET 9

FOR CONTINUATION SEE SHEET 11



- PROPOSED PAVEMENT LEGEND**
- DENOTES LEVELING BINDER (MACHINE METHOD), N50," 1 INCH AND AREA REFLECTIVE CRACK CONTROL TREATMENT (6 OZ.) BETWEEN LEVELING BINDER AND SURFACE COURSE AND HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, 2 INCH. CLASS D PATCHES, 9 INCH. SEE TYPICAL SECTIONS
 - DENOTES HOT-MIX ASPHALT BASE COURSE, 9 INCH. SEE TYPICAL SECTIONS
 - DENOTES PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 7 INCH (PE)
 - DENOTES PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH (PORTLAND CEMENT CONCRETE SIDEWALK, 7 INCH AT PE DRIVEWAYS)
 - DENOTES COMBINATION CONCRETE CURB AND GUTTER, TYPE B--6.12
 - DENOTES PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH WITH DETECTABLE WARNINGS PER I.D.O.T. STANDARDS FOR HANDICAP RAMPS (WHERE APPLICABLE) SEE CONSTRUCTION HIGHWAY STANDARDS
 - PE** DENOTES PRIVATE ENTRANCE
 - CE** DENOTES COMMERCIAL ENTRANCE
 - *** DENOTES PORTLAND CEMENT CONCRETE PAVEMENT, 8 INCH



ALL SAW CUTS SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEM BEING REMOVED.

FOR TYPICAL SECTIONS OF NEW PAVEMENT WORK SEE SHEET 6 & 7

IMPORTANT! FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES INDICATED IN TITLE BLOCK.

FILE NAME: CITY OF BERWYN
EAST AVENUE
31st STREET TO CERMAK ROAD
RESURFACING

USER NAME =
DESIGNED -- THK
DRAWN -- JFP
CHECKED -- JEF
DATE -- 1-24-13

REVISED -- JEF 3-13-13
REVISED -- JEF 4-5-13
REVISED --
REVISED --

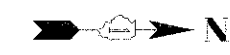
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE: EAST AVENUE - STA. 55+25 TO STA. 64+50
(RESURFACING AND RECONSTRUCTION)

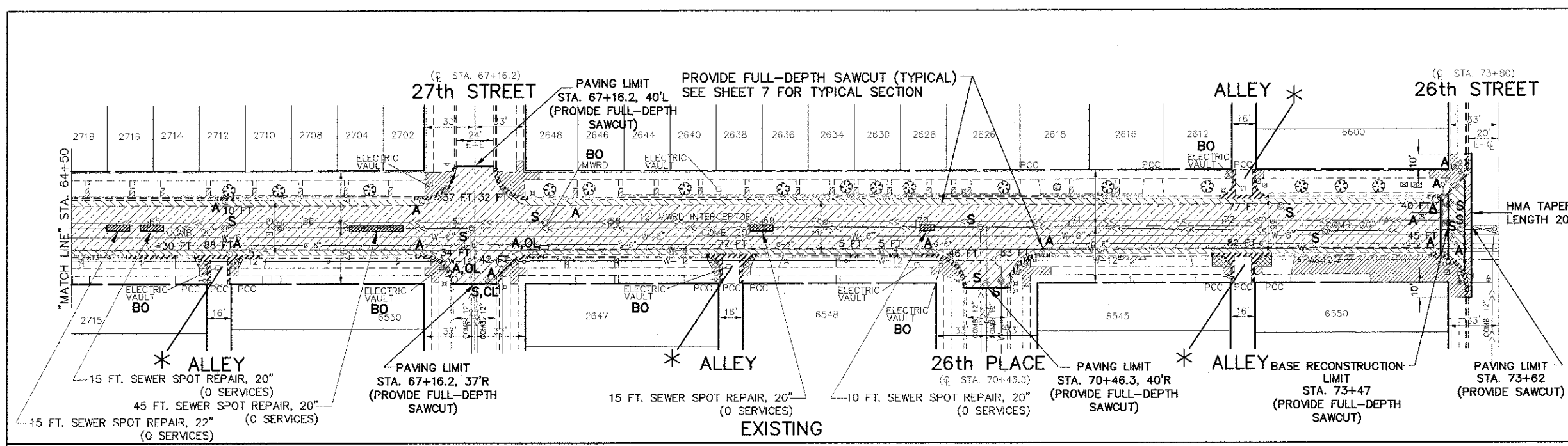
SCALE: 1"=40' SHEET NO. OF SHEETS STA. TO STA.

Frank Novotny & Associates, Inc.
Civil Engineers
605 Midway Drive • Wheeling, IL • 60091 • Telephone: (815) 887-8664 • Fax: (815) 887-0133
ILLINOIS PROFESSIONAL DESIGN FIRM NO. 194-06025

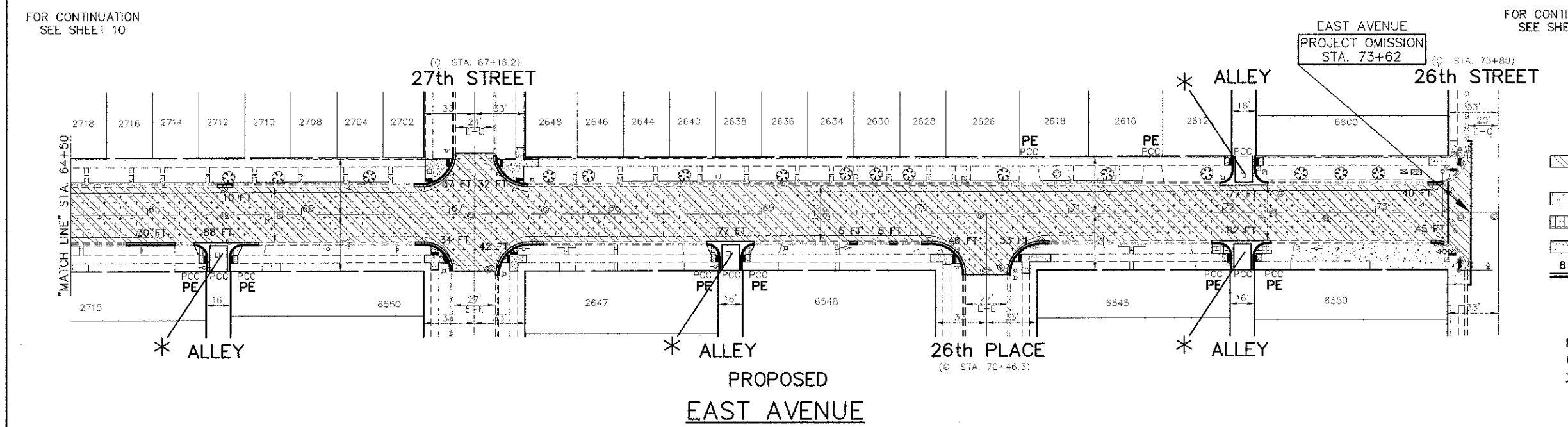
P.A.D. NO. 2779	SECTION 09-00167-00-RS	COUNTY COOK	TOTAL SHEETS NO. 31
CONTRACT NO. 63837			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	M-4003(087)	



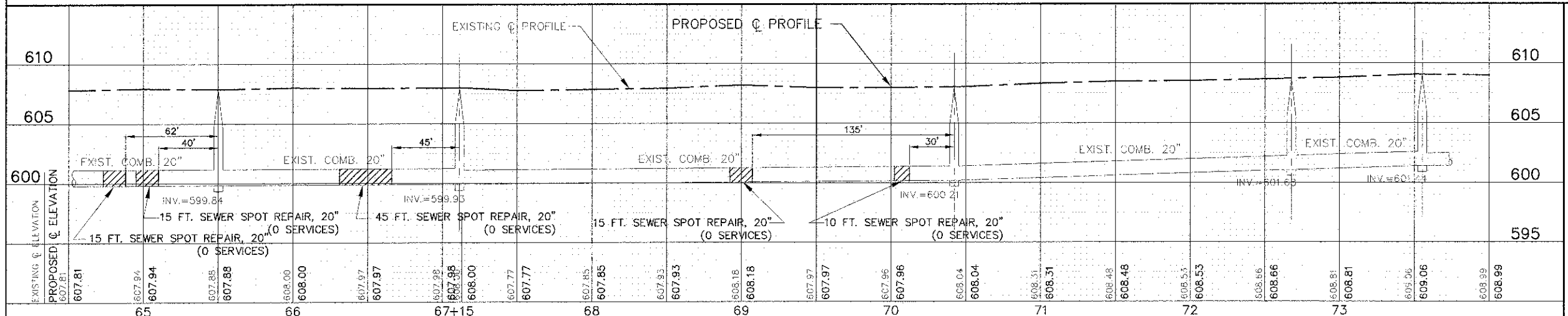
1"=40'



- REMOVAL LEGEND**
- DENOTES HOT-MIX ASPHALT SURFACE REMOVAL—BUTT JOINT
 - DENOTES HOT-MIX ASPHALT SURFACE REMOVAL, 3 INCH. (3.7' WIDTH) SURFACE REMOVAL SHALL COMMENCE ONLY AFTER PLACEMENT OF HOT-MIX ASPHALT BASE COURSE, 9 INCH IN PAVEMENT REMOVAL AREA IS COMPLETED.
 - DENOTES PAVEMENT REMOVAL
 - DENOTES DRIVEWAY PAVEMENT REMOVAL
 - DENOTES SIDEWALK REMOVAL
 - DENOTES COMBINATION CURB AND GUTTER REMOVAL
 - "A" DENOTES EXISTING VALVE VAULTS, VALVE BOXES, INLETS, CATCH BASINS AND MANHOLES TO BE ADJUSTED
 - "BO" DENOTES EXISTING TO BE ADJUSTED (BY OTHERS)
 - "S" DENOTES EXISTING FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)
 - "OL" DENOTES NEW FRAMES AND LIDS, TYPE I, OPEN LID
 - "CL" DENOTES NEW FRAMES AND LIDS, TYPE I, CLOSED LID
 - "R" DENOTES EXISTING VALVE VAULTS TO BE RECONSTRUCTED
 - * DENOTES ALLEY RETURN OR DRIVEWAY TO BE REMOVED WITH PAVEMENT REMOVAL



- PROPOSED PAVEMENT LEGEND**
- DENOTES LEVELING BINDER (MACHINE METHOD), N50, 1 INCH AND AREA REFLECTIVE CRACK CONTROL TREATMENT (6 OZ.) BETWEEN LEVELING BINDER AND SURFACE COURSE AND HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, 2 INCH, CLASS D PATCHES, 9 INCH. SEE TYPICAL SECTIONS
 - DENOTES HOT-MIX ASPHALT BASE COURSE, 9 INCH. SEE TYPICAL SECTIONS
 - DENOTES PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 7 INCH (PE)
 - DENOTES PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH (PORTLAND CEMENT CONCRETE SIDEWALK, 7 INCH AT PE DRIVEWAYS)
 - DENOTES COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
 - DENOTES PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH WITH DETECTABLE WARNINGS PER I.D.O.T. STANDARDS FOR HANDICAP RAMPS (WHERE APPLICABLE) SEE CONSTRUCTION HIGHWAY STANDARDS
 - PE DENOTES PRIVATE ENTRANCE
 - CE DENOTES COMMERCIAL ENTRANCE
 - * DENOTES PORTLAND CEMENT CONCRETE PAVEMENT, 8 INCH



ALL SAW CUTS SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEM BEING REMOVED.

FOR TYPICAL SECTIONS OF NEW PAVEMENT WORK SEE SHEET Z

IMPORTANT!
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES INDICATED IN TITLE BLOCK.

FILE NAME: CITY OF BERWYN
EAST AVENUE
31st STREET TO GERMAK ROAD
RESURFACING

USER NAME: THK
DESIGNED: THK
DRAWN: JFP
CHECKED: JEF
DATE: 1-24-13

REVISOR: JEF 3-13-13
REVISOR: JEF 4-5-13
REVISED: JEF

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLAN & PROFILE: EAST AVENUE - STA. 64+50 TO STA. 73+47
(RESURFACING AND RECONSTRUCTION)
SCALE: 1"=40' SHEET NO. 01 SHEETS STA. TO STA.

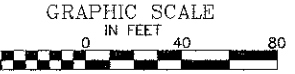
Frank Novotny & Associates, Inc.
Civil Engineers
225 Midway Drive • Willowbrook, IL • 60187 • Telephone (630) 887-8600 • Fax (630) 887-0132
ILLINOIS PROFESSIONAL DESIGN FIRM NO. 184-02028

SECTION	COUNT	TOTAL SHEETS	SHEET NO.
09-00167-00-RS	COOK	31	11

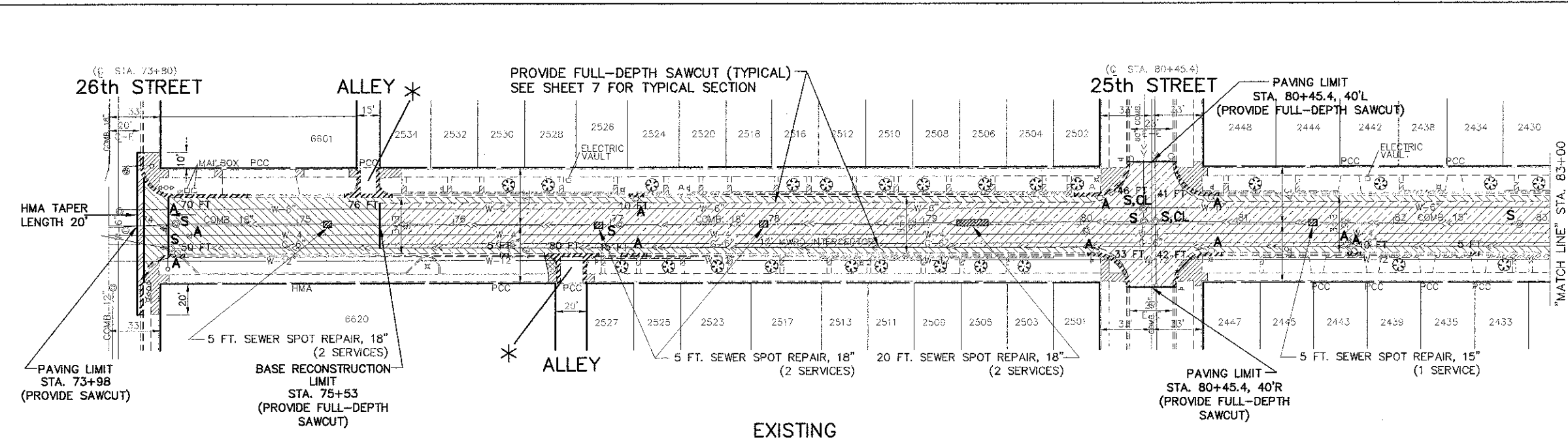
CONTRACT NO. 63837
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT M-4003(087)



1"=40'



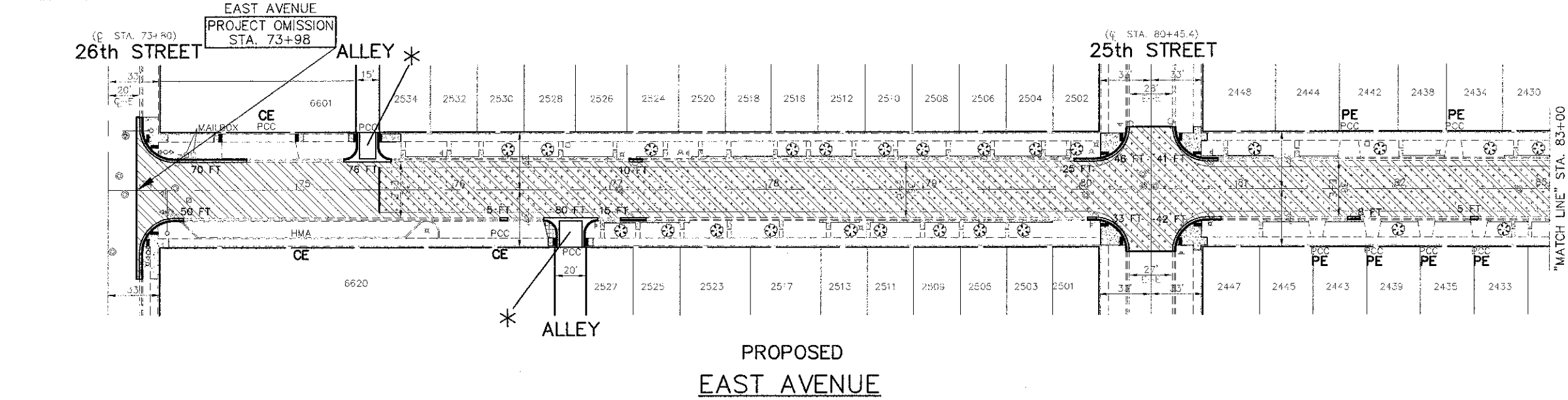
- REMOVAL LEGEND**
- DENOTES HOT-MIX ASPHALT SURFACE REMOVAL—BUTT JOINT
 - DENOTES HOT-MIX ASPHALT SURFACE REMOVAL, 3 INCH, (0' TO 3' WIDTH & VARIES) SURFACE REMOVAL SHALL COMMENCE ONLY AFTER PLACEMENT OF HOT-MIX ASPHALT BASE COURSE, 9 INCH IN PAVEMENT REMOVAL AREA IS COMPLETED.
 - DENOTES PAVEMENT REMOVAL
 - DENOTES DRIVEWAY PAVEMENT REMOVAL
 - DENOTES SIDEWALK REMOVAL
 - 8 FT DENOTES COMBINATION CURB AND GUTTER REMOVAL
 - DENOTES EXISTING VALVE VAULTS, VALVE BOXES, INLETS, CATCH BASINS AND MANHOLES TO BE ADJUSTED
 - DENOTES EXISTING TO BE ADJUSTED (BY OTHERS)
 - DENOTES EXISTING FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)
 - DENOTES NEW FRAMES AND LIDS, TYPE I, OPEN LID
 - DENOTES NEW FRAMES AND LIDS, TYPE I, CLOSED LID
 - DENOTES EXISTING VALVE VAULTS TO BE RECONSTRUCTED
 - DENOTES ALLEY RETURN OR DRIVEWAY TO BE REMOVED WITH PAVEMENT REMOVAL



EXISTING

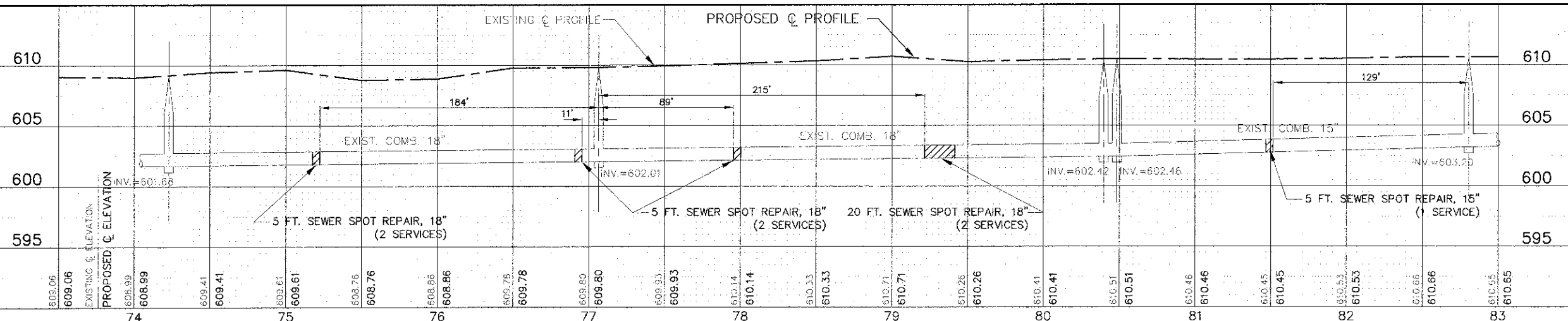
FOR CONTINUATION SEE SHEET 11

FOR CONTINUATION SEE SHEET 13



PROPOSED EAST AVENUE

- PROPOSED PAVEMENT LEGEND**
- DENOTES LEVELING BINDER (MACHINE METHOD), N50, 1 INCH AND AREA REFLECTIVE CRACK CONTROL TREATMENT (8 OZ.) BETWEEN LEVELING BINDER AND SURFACE COURSE AND HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, 2 INCH, CLASS 3 PATCHES, 9 INCH. SEE TYPICAL SECTIONS
 - DENOTES HOT-MIX ASPHALT BASE COURSE, 9 INCH. SEE TYPICAL SECTIONS
 - DENOTES PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 7 INCH (PE)
 - DENOTES PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH (PORTLAND CEMENT CONCRETE SIDEWALK, 7 INCH AT PE DRIVEWAYS)
 - 8 FT DENOTES COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
 - DENOTES PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH WITH DETECTABLE WARNINGS PER I.D.O.T. STANDARDS FOR HANDICAP RAMPS (WHERE APPLICABLE) SEE CONSTRUCTION HIGHWAY STANDARDS
 - DENOTES PRIVATE ENTRANCE
 - DENOTES COMMERCIAL ENTRANCE
 - DENOTES PORTLAND CEMENT CONCRETE PAVEMENT, 8 INCH



ALL SAW CUTS SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEM BEING REMOVED.

FOR TYPICAL SECTIONS OF NEW PAVEMENT WORK SEE SHEET 2

IMPORTANT!
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES INDICATED IN TITLE BLOCK.

FILE NAME: CITY OF BERWYN
EAST AVENUE
31st STREET TO GERMAK ROAD
RESURFACING

DESIGNED BY: IHK
DRAWN BY: JFP
CHECKED BY: JEF
DATE: 1-24-13

REVISED BY: JEF 3-13-13
REVISED BY: JEF 4-5-13

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PLAN & PROFILE: EAST AVENUE - STA. 74+13 TO STA. 83+00
(RESURFACING AND RECONSTRUCTION)

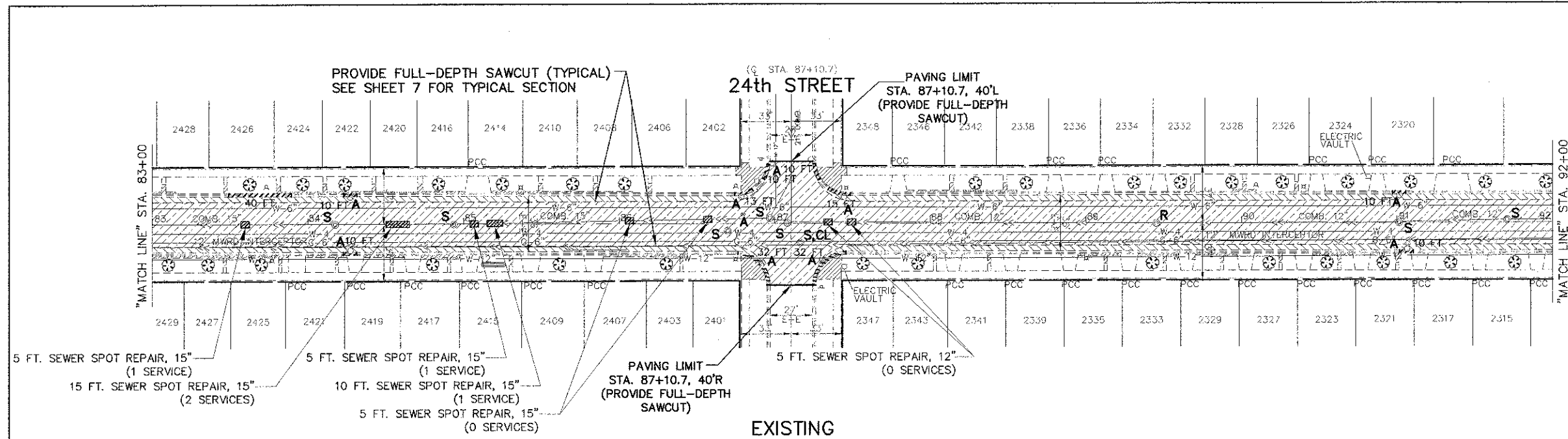
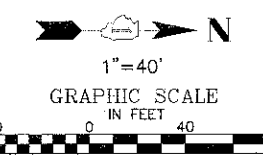
SCALE: 1"=40' SHEET NO. OF SHEETS STA. TO STA.

Frank Novotny & Associates, Inc.
Civil Engineers
Municipal Consultants

ILLINOIS PROFESSIONAL DESIGN FRM NO. 184-00069

F.A.L. NO.	SECTION	COUNTY	TOTAL SHEETS
2779	09-00187-00-RS	COOK	31 12
CONTRACT NO. 63837			

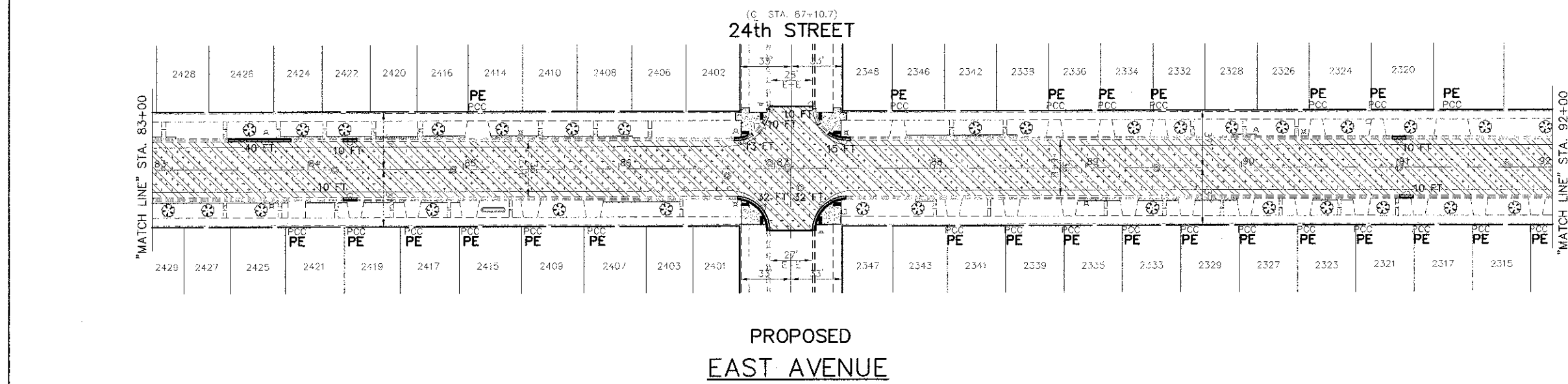
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT M-4003(087)



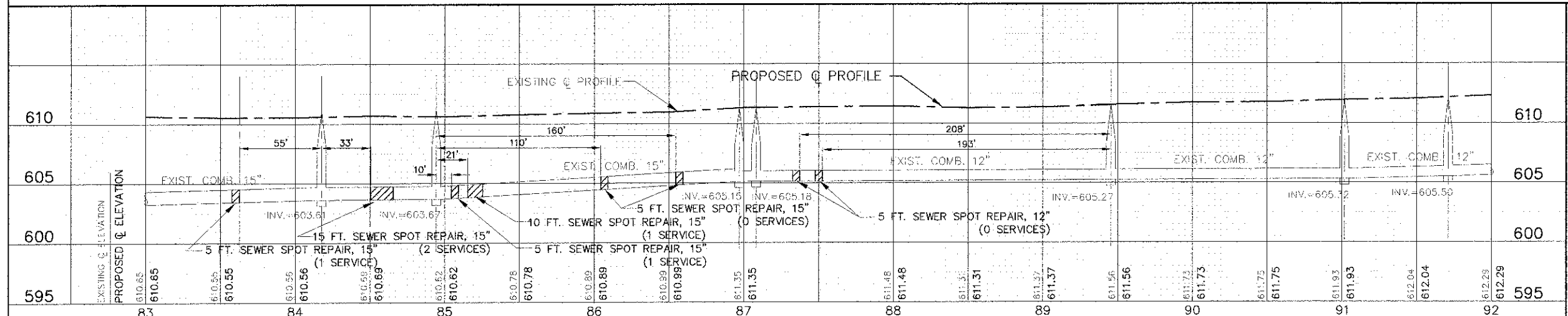
- REMOVAL LEGEND**
- DENOTES HOT-MIX ASPHALT SURFACE REMOVAL-BUTT JOINT
 - DENOTES HOT-MIX ASPHALT SURFACE REMOVAL, 3 INCH. (0' TO 3.7' WIDTH & VARIES) SURFACE REMOVAL SHALL COMMENCE ONLY AFTER PLACEMENT OF HOT-MIX ASPHALT BASE COURSE, 9 INCH IN PAVEMENT REMOVAL AREA IS COMPLETED.
 - DENOTES PAVEMENT REMOVAL
 - DENOTES DRIVEWAY PAVEMENT REMOVAL
 - DENOTES SIDEWALK REMOVAL
 - DENOTES COMBINATION CURB AND GUTTER REMOVAL
 - "A"** DENOTES EXISTING VALVE VAULTS, VALVE BOXES, INLETS, CATCH BASINS AND MANHOLES TO BE ADJUSTED
 - "BO"** DENOTES EXISTING TO BE ADJUSTED (BY OTHERS)
 - "S"** DENOTES EXISTING FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)
 - "OL"** DENOTES NEW FRAMES AND LIDS, TYPE I, OPEN LID
 - "CL"** DENOTES NEW FRAMES AND LIDS, TYPE I, CLOSED LID
 - "R"** DENOTES EXISTING VALVE VAULTS TO BE RECONSTRUCTED
 - DENOTES ALLEY RETURN OR DRIVEWAY TO BE REMOVED WITH PAVEMENT REMOVAL

FOR CONTINUATION
SEE SHEET 12

FOR CONTINUATION
SEE SHEET 14



- PROPOSED PAVEMENT LEGEND**
- DENOTES LEVELING BINDER (MACHINE METHOD), N50, 1 INCH AND AREA REFLECTIVE CRACK CONTROL TREATMENT (6 OZ.) BETWEEN LEVELING BINDER AND SURFACE COURSE AND HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, 2 INCH, CLASS D PATCHES, 9 INCH. SEE TYPICAL SECTIONS
 - DENOTES HOT-MIX ASPHALT BASE COURSE, 9 INCH, SEE TYPICAL SECTIONS
 - DENOTES PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 7 INCH (PE)
 - DENOTES PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH (PORTLAND CEMENT CONCRETE SIDEWALK, 7 INCH AT PE DRIVEWAYS)
 - DENOTES COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
 - DENOTES PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH WITH DETECTABLE WARNINGS PER I.D.O.T. STANDARDS FOR HANDICAP RAMPS (WHERE APPLICABLE) SEE CONSTRUCTION HIGHWAY STANDARDS
 - PE** DENOTES PRIVATE ENTRANCE
 - CE** DENOTES COMMERCIAL ENTRANCE
 - DENOTES PORTLAND CEMENT CONCRETE PAVEMENT, 8 INCH



ALL SAW CUTS SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEM BEING REMOVED.

FOR TYPICAL SECTIONS OF NEW PAVEMENT WORK SEE SHEET Z

IMPORTANT!
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES INDICATED IN TITLE BLOCK.

FILE NAME: CITY OF BERWYN
EAST AVENUE
31st STREET TO CERMAK ROAD
RESURFACING

USER NAME: THK
DESIGNED: THK
DRAWN: JFP
CHECKED: JFP
DATE: 1-24-13

REVISIONS:
REVISED: JEF 3-13-13
REVISED: JEF 4-5-13

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE: EAST AVENUE - STA. 83+00 TO STA. 92+00
(RESURFACING AND RECONSTRUCTION)
SCALE: 1" = 40' SHEET NO. OF SHEETS STA. TO STA.

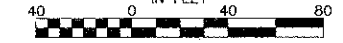
Frank Novotny & Associates, Inc.
605 Midway Drive • Wheeling, IL • 60091 • Telephone: (815) 851-8100 • Fax: (815) 851-0130
ILLINOIS PROFESSIONAL DESIGN FIRM NO. 184-000208

PLAN NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2779	09-00167-00-RS	COOK	31	13
CONTRACT NO. 63837			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT M-4003(087)	



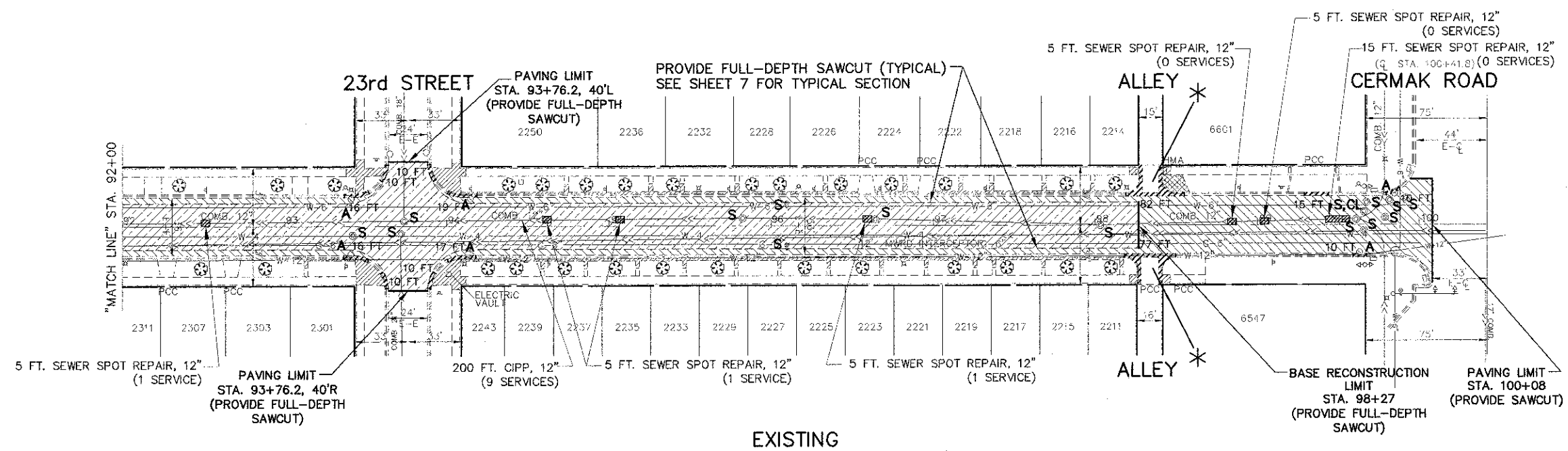
1"=40'

GRAPHIC SCALE



REMOVAL LEGEND

- DENOTES HOT-MIX ASPHALT SURFACE REMOVAL—BUTT JOINT
- DENOTES HOT-MIX ASPHALT SURFACE REMOVAL, 3 INCH. SURFACE REMOVAL SHALL COMMENCE ONLY AFTER PLACEMENT OF HOT-MIX ASPHALT BASE COURSE, 9 INCH IN PAVEMENT REMOVAL AREA IS COMPLETED.
- DENOTES PAVEMENT REMOVAL
- DENOTES DRIVEWAY PAVEMENT REMOVAL
- DENOTES SIDEWALK REMOVAL
- DENOTES COMBINATION CURB AND GUTTER REMOVAL
- "A"** DENOTES EXISTING VALVE VAULTS, VALVE BOXES, INLETS, CATCH BASINS AND MANHOLES TO BE ADJUSTED
- "BO"** DENOTES EXISTING TO BE ADJUSTED (BY OTHERS)
- "S"** DENOTES EXISTING FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)
- "OL"** DENOTES NEW FRAMES AND LIDS, TYPE I, OPEN LID
- "CL"** DENOTES NEW FRAMES AND LIDS, TYPE I, CLOSED LID
- "R"** DENOTES EXISTING VALVE VAULTS TO BE RECONSTRUCTED
- DENOTES ALLEY RETURN OR DRIVEWAY TO BE REMOVED WITH PAVEMENT REMOVAL



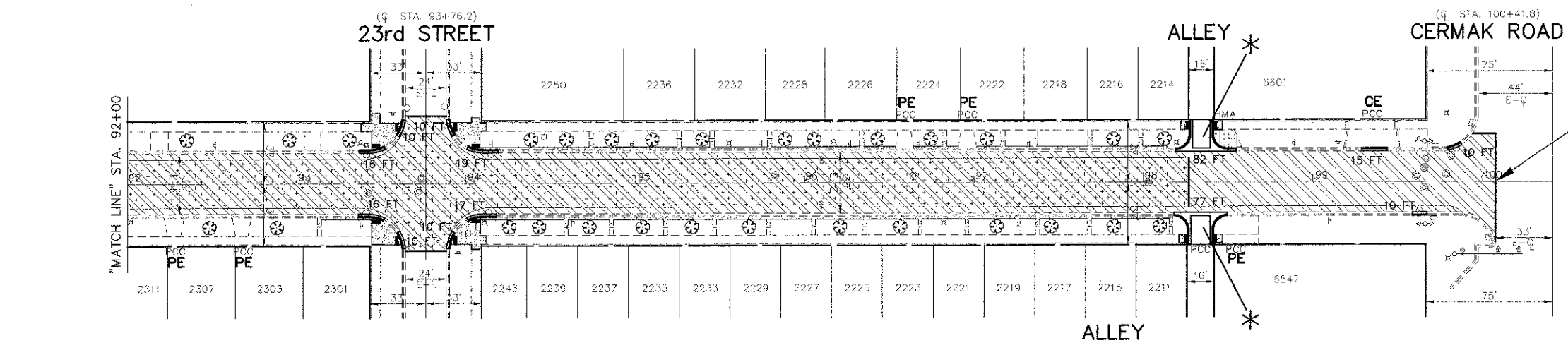
EXISTING

FOR CONTINUATION
SEE SHEET 13

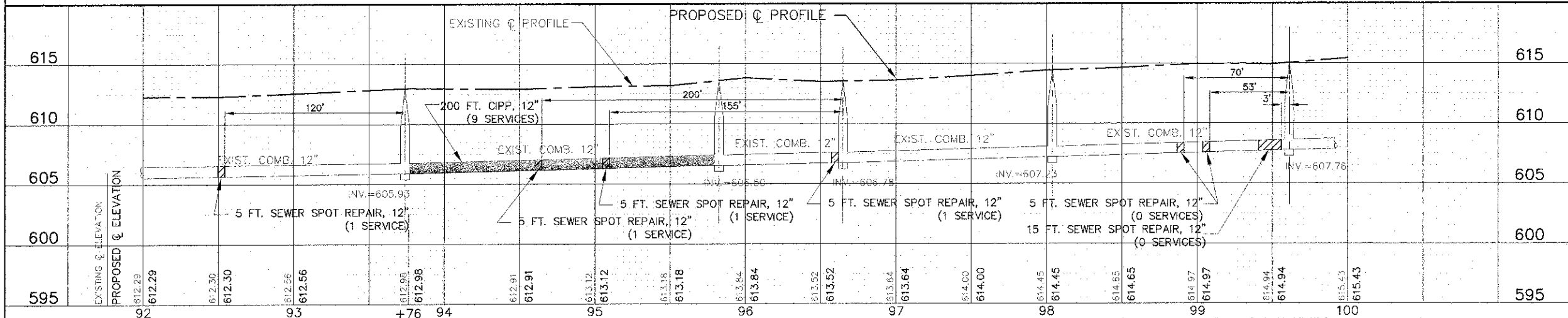
EAST AVENUE
PROJECT ENDS
STA. 100+08

PROPOSED PAVEMENT LEGEND

- DENOTES LEVELING BINDER (MACHINE METHOD), N50, 1 INCH AND AREA REFLECTIVE CRACK CONTROL TREATMENT (6 OZ.) BETWEEN LEVELING BINDER AND SURFACE COURSE AND HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, 2 INCH. CLASS D PATCHES, 9 INCH. SEE TYPICAL SECTIONS
- DENOTES HOT-MIX ASPHALT BASE COURSE, 9 INCH. SEE TYPICAL SECTIONS
- DENOTES PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 7 INCH (PE)
- DENOTES PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH (PORTLAND CEMENT CONCRETE SIDEWALK, 7 INCH AT PE DRIVEWAYS)
- DENOTES COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
- DENOTES PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH WITH DETECTABLE WARNINGS PER I.D.O.T. STANDARDS FOR HANDICAP RAMPS (WHERE APPLICABLE) SEE CONSTRUCTION HIGHWAY STANDARDS
- PE** DENOTES PRIVATE ENTRANCE
- CE** DENOTES COMMERCIAL ENTRANCE
- DENOTES PORTLAND CEMENT CONCRETE PAVEMENT, 8 INCH



**PROPOSED
EAST AVENUE**



ALL SAW CUTS SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEM BEING REMOVED.

FOR TYPICAL SECTIONS OF NEW PAVEMENT WORK SEE SHEET Z

IMPORTANT!
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES INDICATED IN TITLE BLOCK.

Frank Novotny & Associates, Inc.
 855 Midway Drive • Wheeling, IL • 60097 • Telephone: (815) 887-8600 • Fax: (815) 887-0132
 ILLINOIS PROFESSIONAL DESIGN FIRM NO. 184-06060

FILE NAME: CITY OF BERWYN
 EAST AVENUE
 31st STREET TO CERMAK ROAD
 RESURFACING

USER NAME: THK
 DESIGNED: THK
 DRAWN: JFP
 CHECKED: JFP
 DATE: 1-24-13

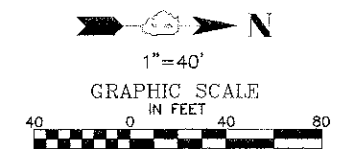
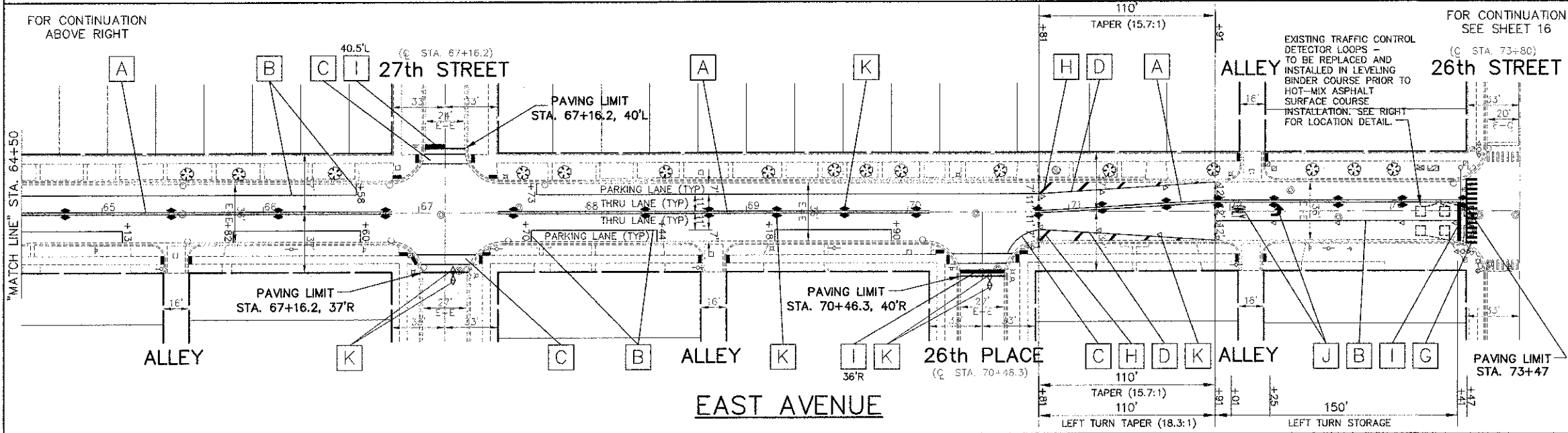
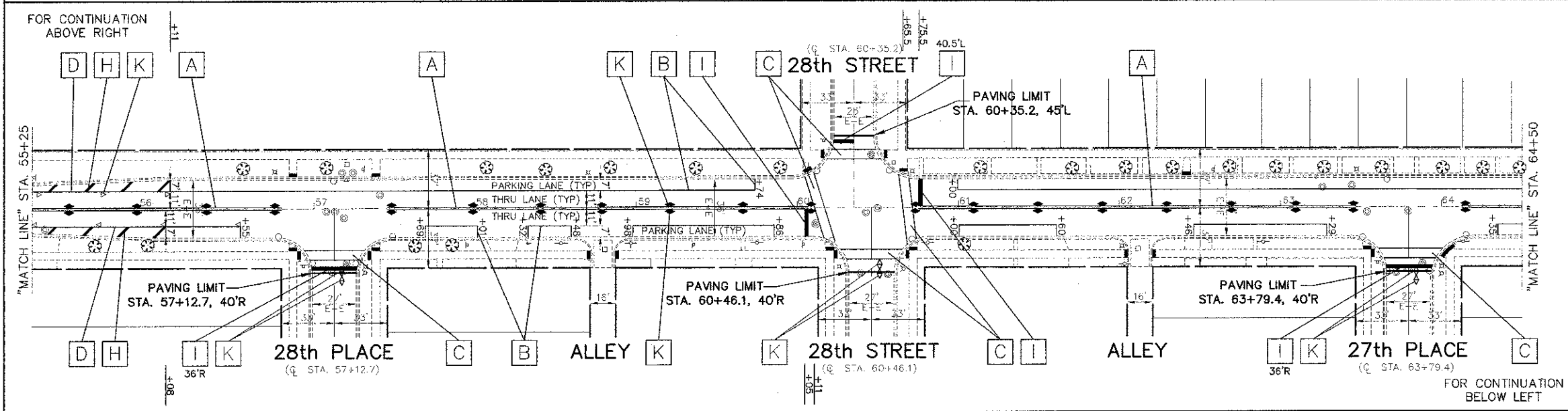
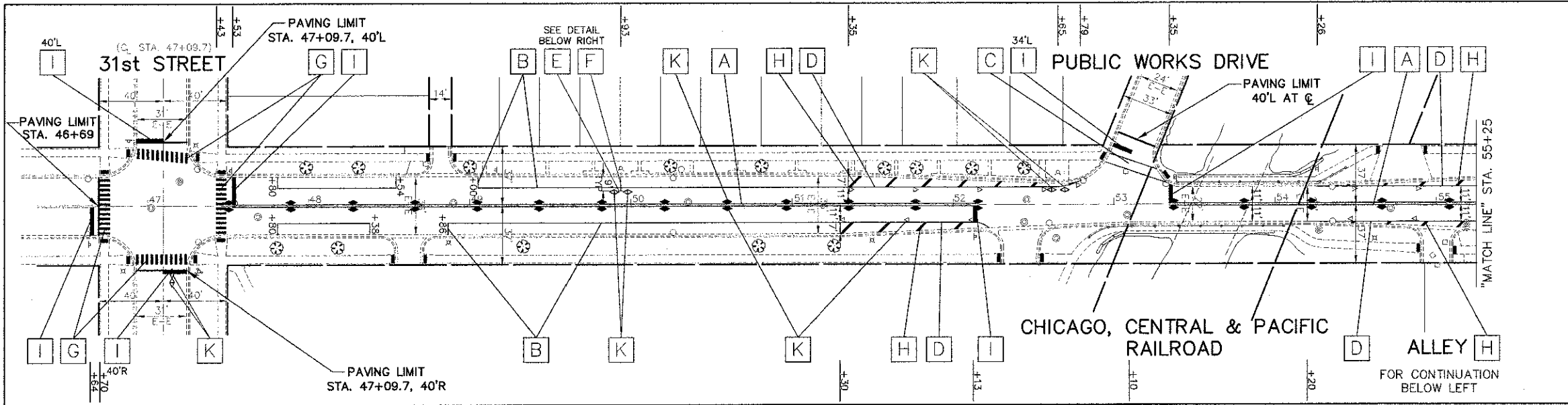
REVISIONS:
 REVISED: JEF 3-13-13
 REVISED: JEF 4-5-13

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE: EAST AVENUE - STA. 92+00 TO STA. 100+08
 (RESURFACING AND RECONSTRUCTION)

SCALE: 1"=40' SHEET NO. OF SHEETS STA. TO STA.

SECTION	COUNTY	TOTAL SHEETS
09-00167-00-RS	COOK	31
CONTRACT NO. 63837		14
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT M-4003(087)

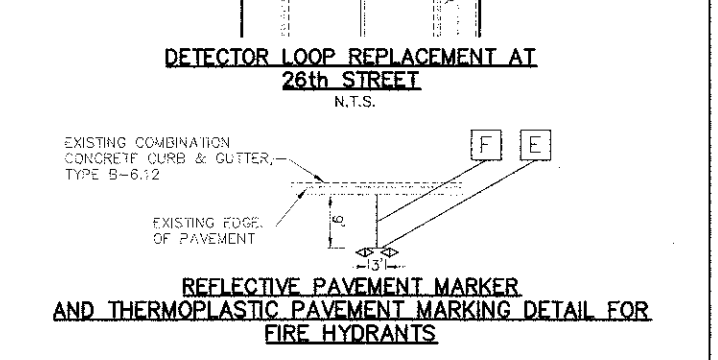
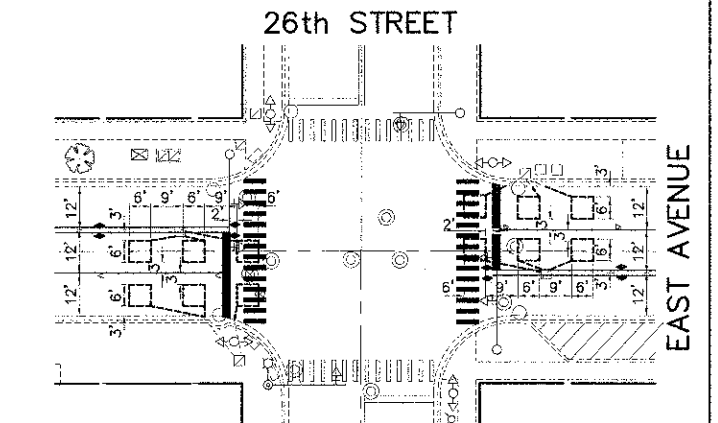


- THERMOPLASTIC PAVEMENT MARKING CODE**
- [A] CENTERLINE - DOUBLE SOLID YELLOW PREFORMED PLASTIC PAVEMENT MARKING, TYPE D - INLAID - LINE 4", 11" O/C
 - [B] TURN AND PARKING LANE - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING - LINE 6"
 - [C] PEDESTRIAN CROSSWALK - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING - LINE 6"
 - [D] CHANNELIZATION LINE - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING - LINE 8"
 - [E] FIRE HYDRANT - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING - LINE 8", 3' IN LENGTH
 - [F] FIRE HYDRANT - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING - LINE 8", 9' IN LENGTH
 - [G] SCHOOL CROSSWALK - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING - LINE 12", 90"
 - [H] CHANNELIZATION DIAGONALS - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING - LINE 12", 45"
 - [I] STOP BAR - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING - LINE 24"
 - [J] LETTERS AND SYMBOLS - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING
- REFLECTIVE PAVEMENT MARKERS**
- [K] PROPOSED RECESSED REFLECTIVE PAVEMENT MARKERS - 80" O/C OR AS SHOWN
 - ▶ TWO-WAY AMBER MARKER
 - ◀ ONE-WAY AMBER MARKER
 - ◀ ONE-WAY CRYSTAL MARKER
 - ◀ TWO-WAY BLUE MARKER

NOTE: SHORT-TERM PAVEMENT MARKING IS PROPOSED ON THE MILLED PAVEMENT, NEW BINDER AND ON THE NEW SURFACE. SEE ARTICLE 703.04 OF THE LATEST EDITION OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".

NOTE: ALL "ARROWS" AND "ONLYS" SHALL BE 8" IN HEIGHT.

NOTE: PROPOSED CENTERLINE - DOUBLE SOLID YELLOW THERMOPLASTIC PAVEMENT MARKING - 4", 11" O/C (NOTE: [A]) IS MEASURED PER LINE. TOTAL QUANTITY AND PAYMENT LENGTH IS FOR EACH LINEAR FOOT OF SINGLE 4" STRIPE INSTALLED.



IMPORTANT!

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES INDICATED IN TITLE BLOCK.

FOR PAVEMENT MARKING DETAILS SEE SHEET 21
FOR DISTRICT DETAIL TC-13

FILE NAME: CITY OF BERWYN
EAST AVENUE
31st STREET TO CERMAK ROAD
RESURFACING

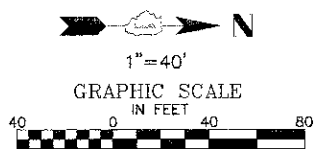
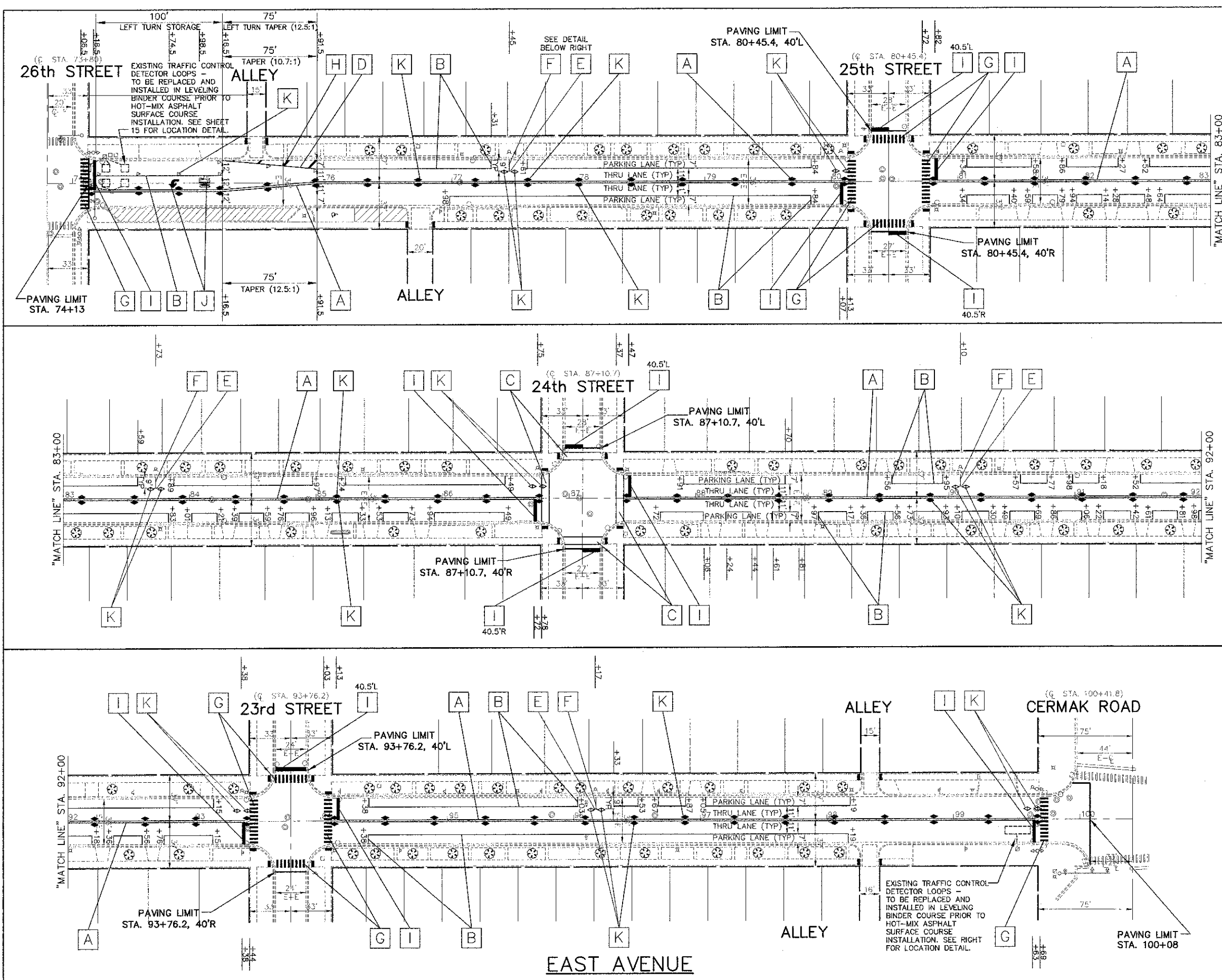
USER NAME: AMS
DESIGNED: JFP
DRAWN: JFP
CHECKED: JEF
DATE: 2-1-13

REVISIONS:
REVISED: JEF 3-13-13
REVISED: JEF 4-5-13

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN: EAST AVENUE - 31st STREET TO STA. 73+47
(PAVEMENT MARKING)
SCALE: 1"=40'
SHEET NO. OF SHEETS STA. TO STA.

Frank Novotny & Associates, Inc.		TOTAL SHEETS	
155 Midway Drive • Willowbrook, IL • 60127 • Telephone: (630) 887-8960 • Fax: (630) 857-0132	COUNTY		31
ILLINOIS PROFESSIONAL DESIGN FIRM NO. 164-000000	SECTION		09-00167-00-RS
	CONTRACT NO.		63837
	FED. ROAD DIST. NO.		M-4003(087)

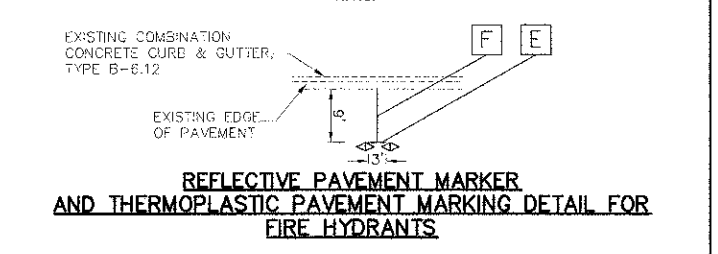
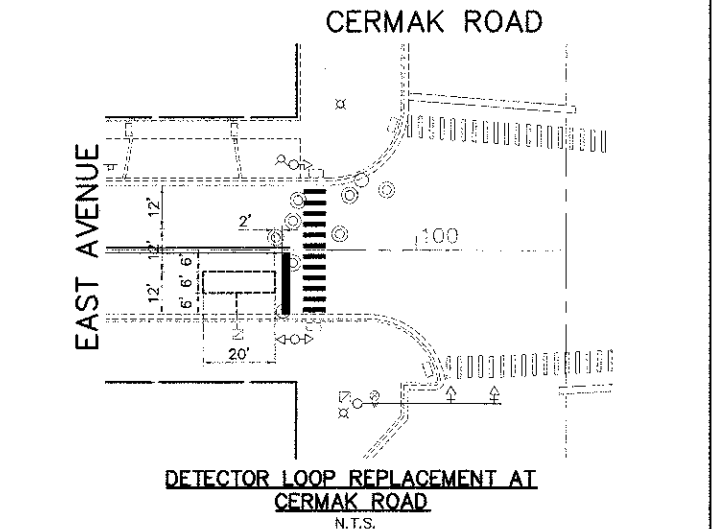


- THERMOPLASTIC PAVEMENT MARKING CODE**
- [A] CENTERLINE - DOUBLE SOLID YELLOW PREFORMED PLASTIC PAVEMENT MARKING, TYPE D - INLAID - LINE 4", 11" O/C
 - [B] TURN AND PARKING LANE - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING - LINE 6"
 - [C] PEDESTRIAN CROSSWALK - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING - LINE 6"
 - [D] CHANNELIZATION LINE - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING - LINE 8"
 - [E] FIRE HYDRANT - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING - LINE 8", 3' IN LENGTH
 - [F] FIRE HYDRANT - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING - LINE 8", 9' IN LENGTH
 - [G] SCHOOL CROSSWALK - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING - LINE 12", 90"
 - [H] CHANNELIZATION DIAGONALS - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING - LINE 12", 45"
 - [I] STOP BAR - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING - LINE 24"
 - [J] LETTERS AND SYMBOLS - SOLID WHITE THERMOPLASTIC PAVEMENT MARKING
- REFLECTIVE PAVEMENT MARKERS**
- [K] PROPOSED RECESSED REFLECTIVE PAVEMENT MARKERS - 80' O/C OR AS SHOWN
 - ▶ TWO-WAY AMBER MARKER
 - ◀ ONE-WAY AMBER MARKER
 - ▶ ONE-WAY CRYSTAL MARKER
 - ◀ TWO-WAY BLUE MARKER

NOTE: SHORT-TERM PAVEMENT MARKING IS PROPOSED ON THE MILLED PAVEMENT, NEW BINDER AND ON THE NEW SURFACE. SEE ARTICLE 703.04 OF THE LATEST EDITION OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".

NOTE: ALL "ARROWS" AND "ONLYS" SHALL BE 8" IN HEIGHT.

NOTE: PROPOSED CENTERLINE - DOUBLE SOLID YELLOW THERMOPLASTIC PAVEMENT MARKING - 4", 11" O/C (NOTE: [A] IS MEASURED PER LINE. TOTAL QUANTITY AND PAYMENT LENGTH IS FOR EACH LINEAR FOOT OF SINGLE 4" STRIPE INSTALLED).



IMPORTANT!

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES INDICATED IN TITLE BLOCK.

FOR PAVEMENT MARKING DETAILS SEE SHEET 21 FOR DISTRICT DETAIL TC-13

FILE NAME	CITY OF BERWYN EAST AVENUE 31st STREET TO CERMAK ROAD RESURFACING	USER NAME	DESIGNED - AMS DRAWN - JFP CHECKED - JEF DATE - 2-1-13	REVISED - JEF 3-13-13 REVISED - JEF 4-5-13
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

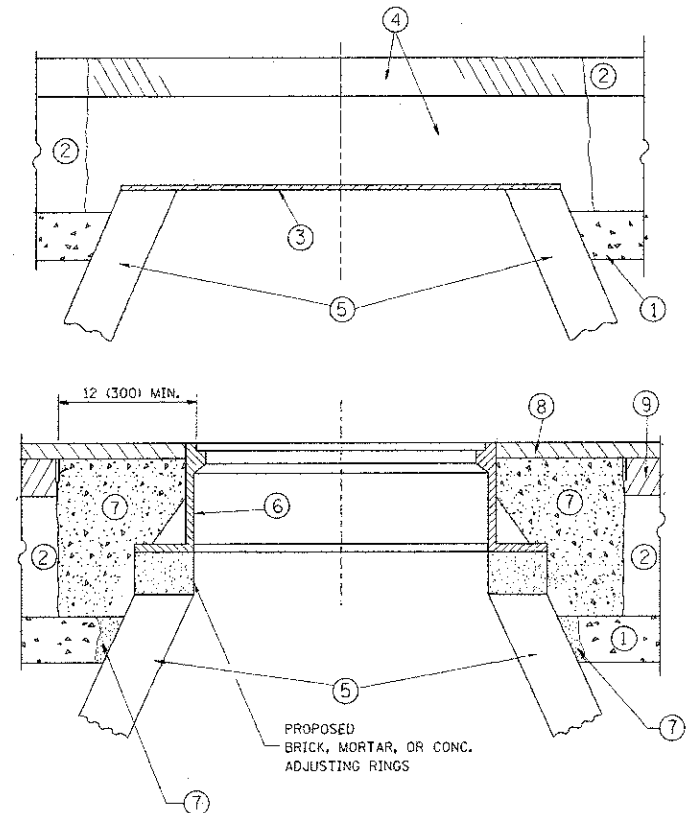
**PLAN: STA. 74+13 TO CERMAK ROAD
(PAVEMENT MARKING)**

SCALE: 1" = 40' SHEET NO. OF SHEETS STA. TO STA.

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306 Midway Drive • Willowbrook, IL • 60527 • Telephone: (630) 887-8660 • Fax: (630) 887-8158
ILLINOIS PROFESSIONAL DESIGN FIRM NO. 124-000605

F.A.S. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2779	09-00167-00-RS	COOK	31	16
CONTRACT NO. 63837				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT M-4003(087)				



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 1/2 (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

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.

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.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

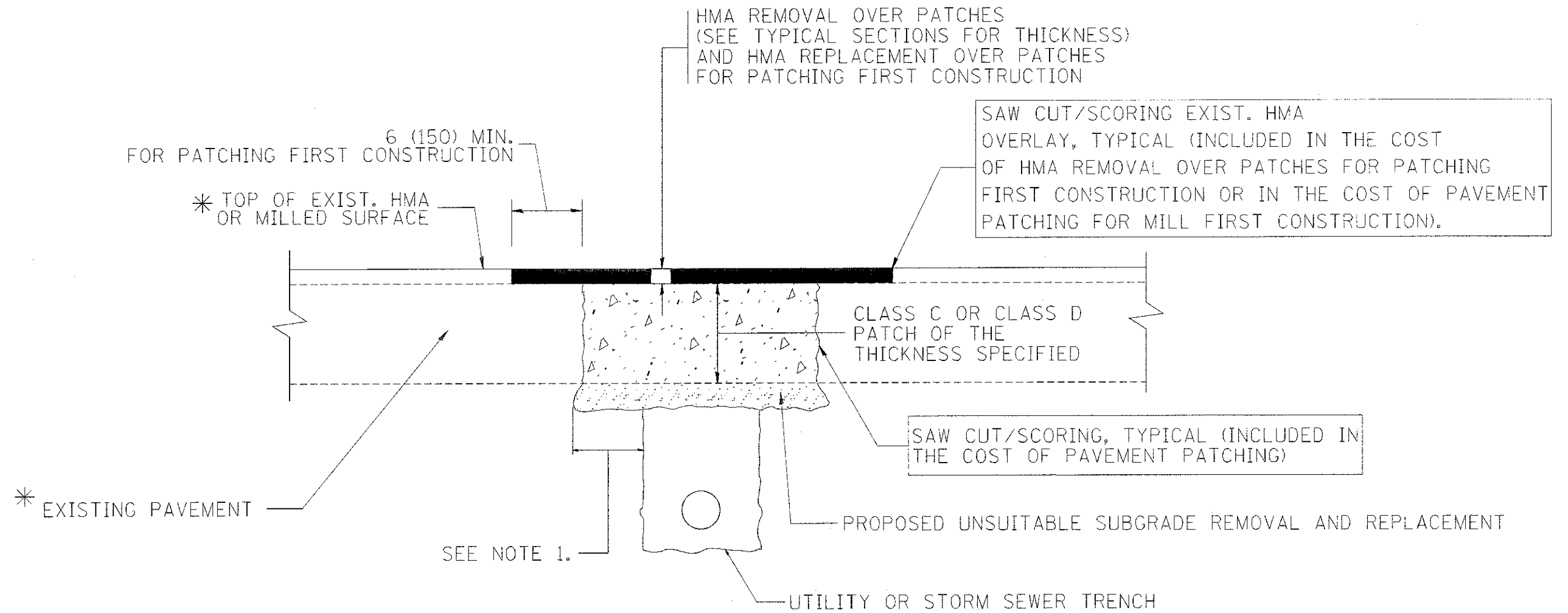
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME =	USER NAME = bauer-dj	DESIGNED - R. SHAH	REVISED - R. WIEDEMAN 05-14-04
as\work\spec\dot\bauer\dj\10120315\bd08.dgn		DRAWN -	REVISED - R. BORO 01-01-07
PLOT SCALE = 1/8" = 1' / in		CHECKED -	REVISED - R. BORO 03-09-11
PLOT DATE = 12/6/2011		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 NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.D. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2779	09-00167-00-RS	COOK	31	17
BD600-03 (BD-8)			CONTRACT NO. 63837	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(087)				



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

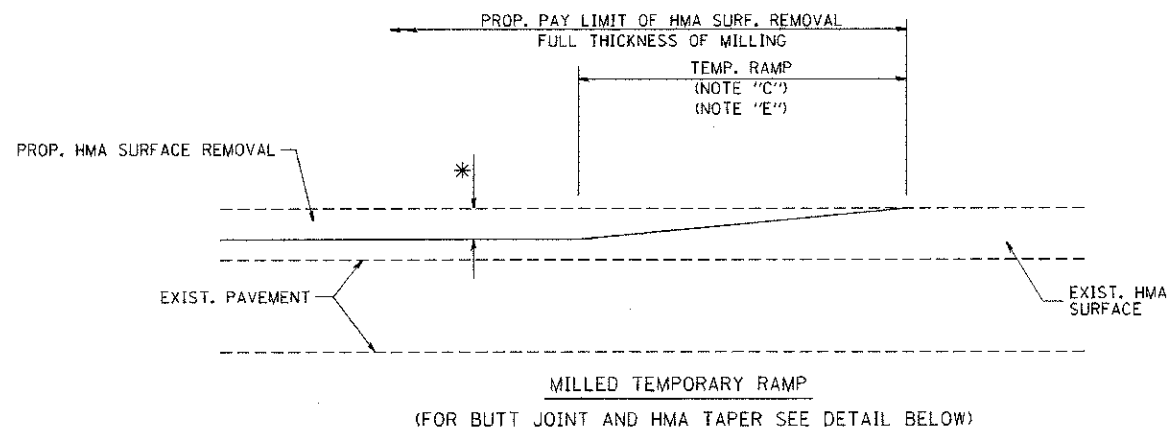
1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

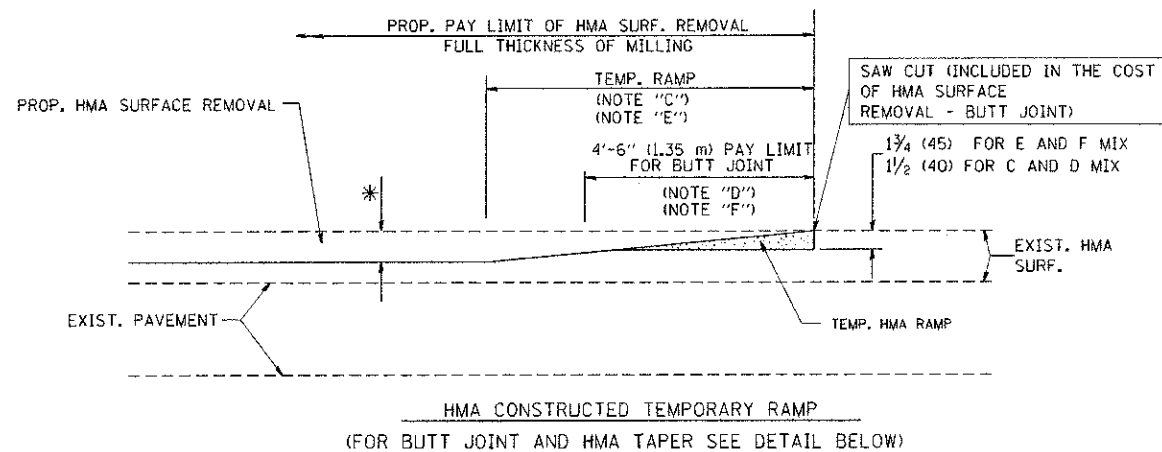
1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

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

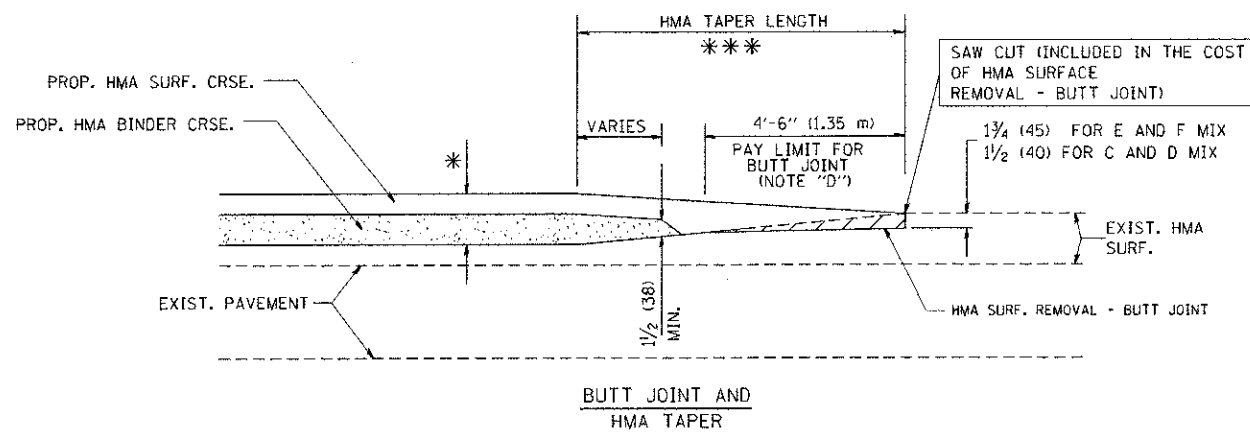
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		DRAWN -	REVISED - R. BORO 01-01-07		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	BD400-04 (BD-22)		CONTRACT NO. 63837	
		PLOT SCALE = 50,000' = 1" IN.	REVISED - R. BORO 09-04-07		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(087)							
		PLOT DATE = 10/27/2008	REVISED - K. ENG 10-27-08									



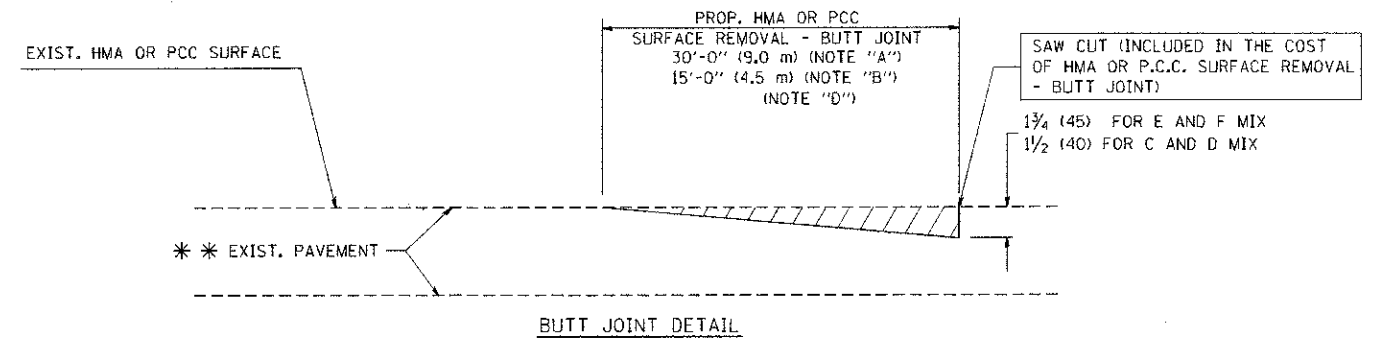
OPTION 1



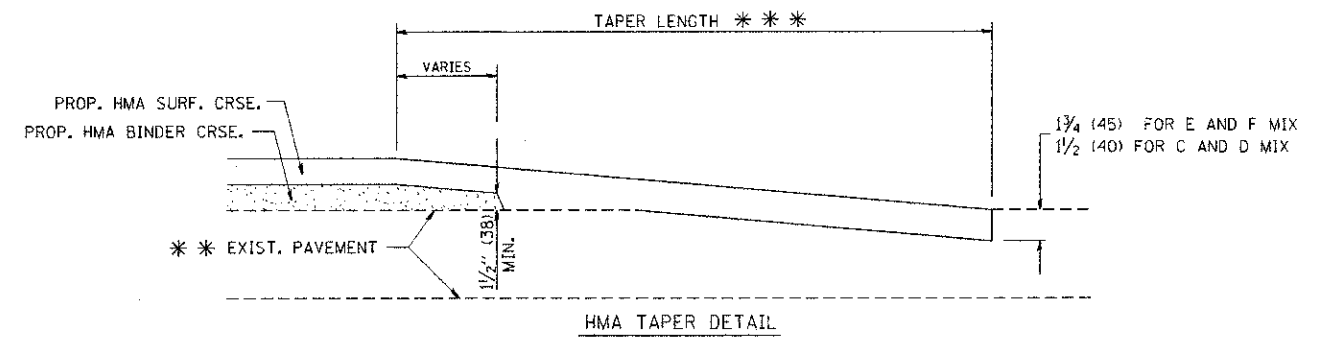
**OPTION 2
TYPICAL TEMPORARY RAMP**



**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
 - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 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.

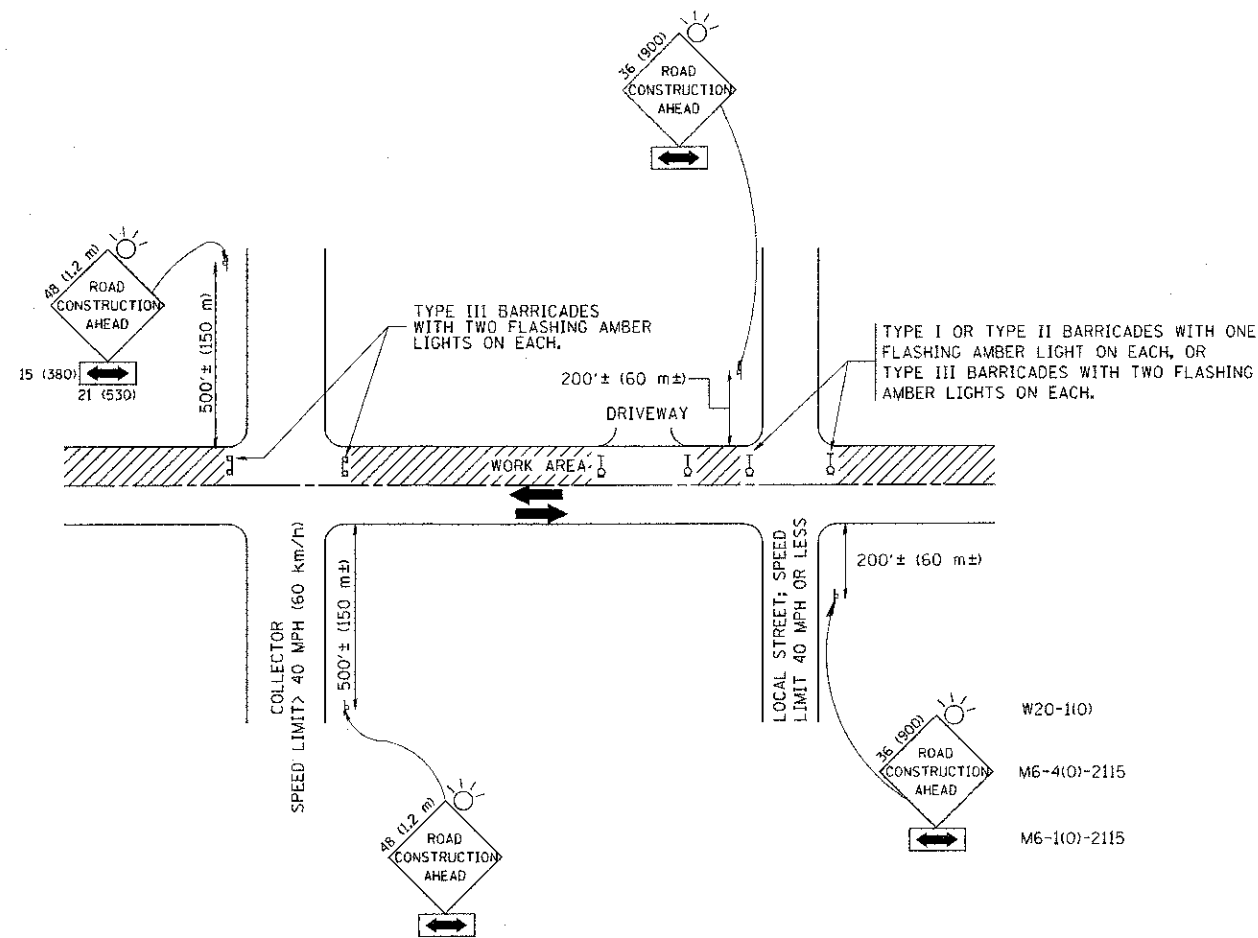
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		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50.0000 / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 1/4/2008	DATE - 05-13-90	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BUTT JOINT AND
HMA TAPER DETAILS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2779	09-00167-00-RS	COOK	31	19
BD400-05 BD32			CONTRACT NO. 63837	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(087)				



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

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
 - 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 AND FLAG 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. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-4) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
 - C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
 - D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

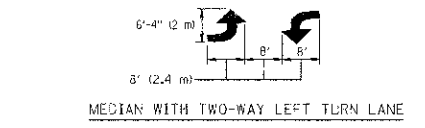
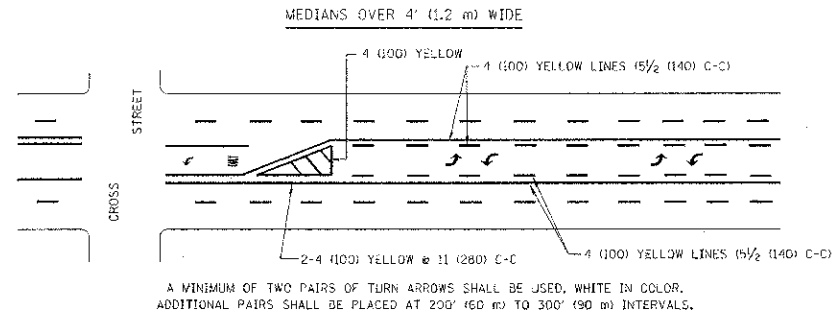
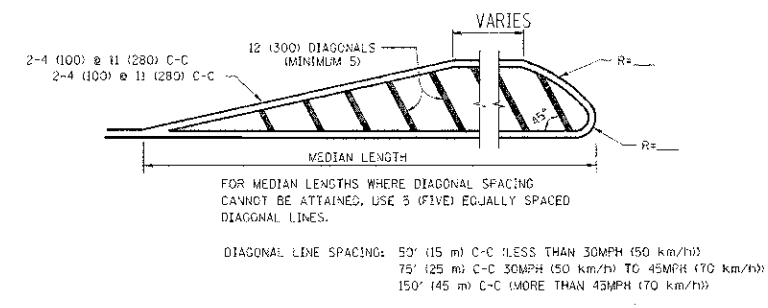
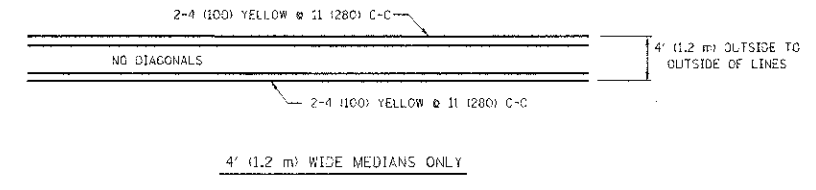
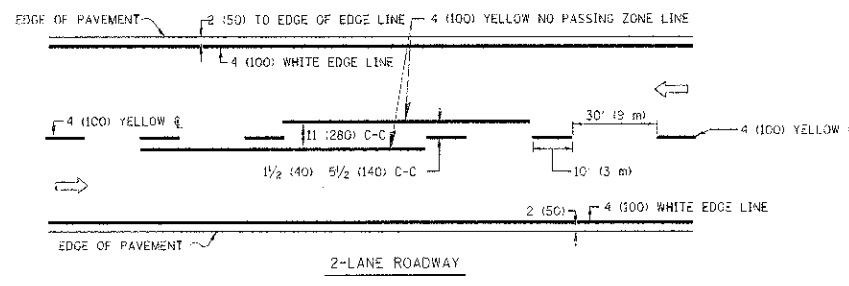
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

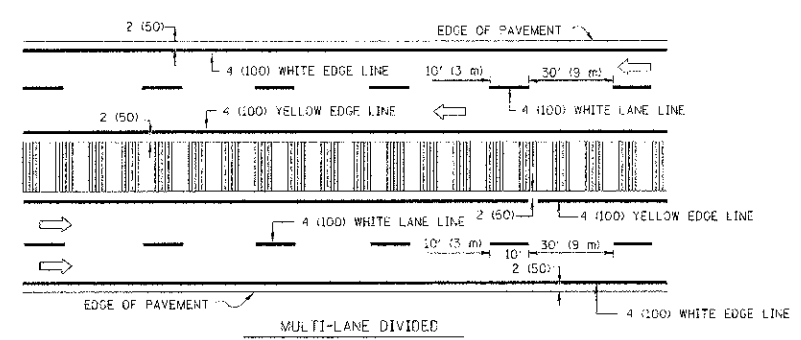
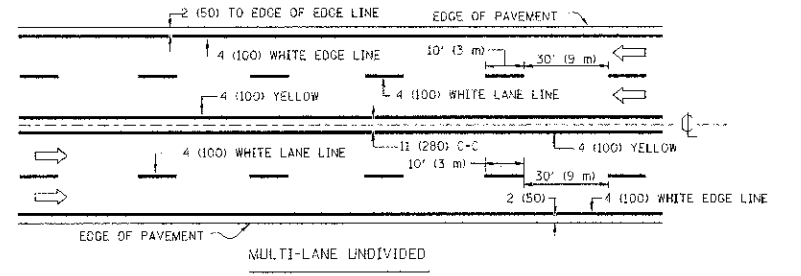
**TRAFFIC CONTROL AND PROTECTION FOR
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.J. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2779	09-00167-00-RS	COOK	31	20
TC-10			CONTRACT NO. 63837	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(057)				

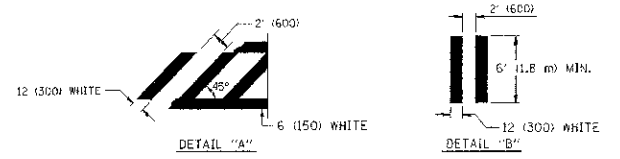
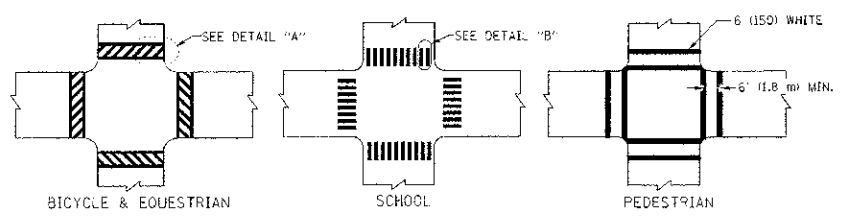


TYPICAL PAINTED MEDIAN MARKING

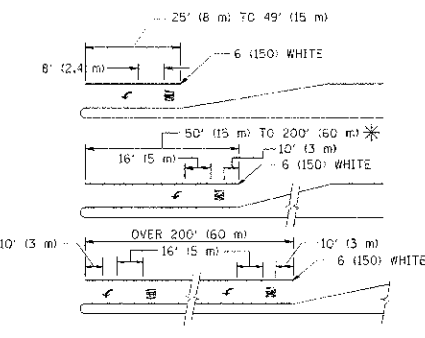


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING

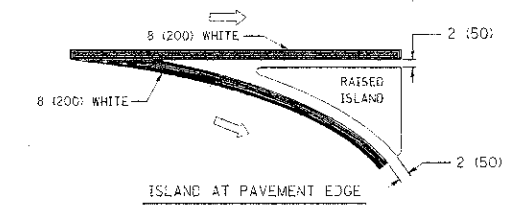
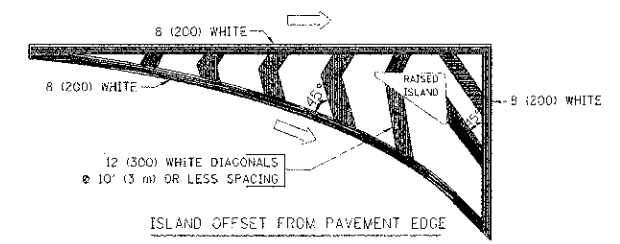


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
* AREA = 15.8 SQ. FT. (1.5 m²); ONLY AREA = 20.8 SQ. FT. (1.9 m²)

* 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



TYPICAL ISLAND MARKING

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	5/2 (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 MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4 m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4 m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH & 5/2 (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 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" 15' (4.5 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD T8000 AREA OF: "R" = 3.6 SQ. FT. (0.33 m ²) EACH "X" = 54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS	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))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD T8000.

	LARGE SIZE	SMALL SIZE
THROUGH ARROW	1.07 (11.5)	0.60 (6.5)
LEFT OR RIGHT ARROW	1.47 (15.6)	0.60 (6.5)
COMBINATION LEFT (RIGHT) AND THROUGH ARROW	2.42 (26.0)	1.37 (14.7)
RAILROAD "R" 1.8m (6ft.)	0.33 (3.6)	—
RAILROAD "X" 6.1m (20ft.)	5.02 (54.0)	—
HANDICAPPED SYMBOL	0.43 (4.6)	—

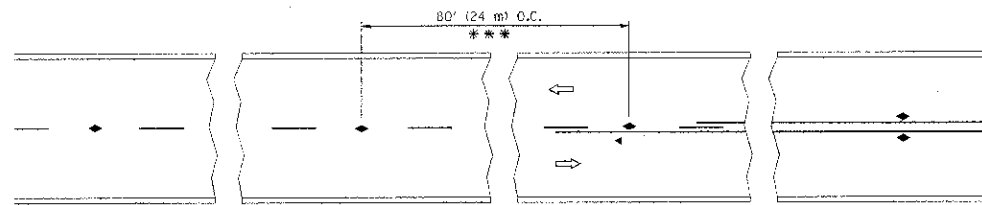
All dimensions are in inches (millimeters) unless otherwise shown.

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PROJECT NAME =	PROJECT NO. =	DRAWN -	REVISED - C. JUCIUS 09-09-09
PLOT SCALE = 50:2000 1" = 40'	DATE = 03-19-90	CHECKED -	REVISED -
PLOT DATE = 9/2/2009			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

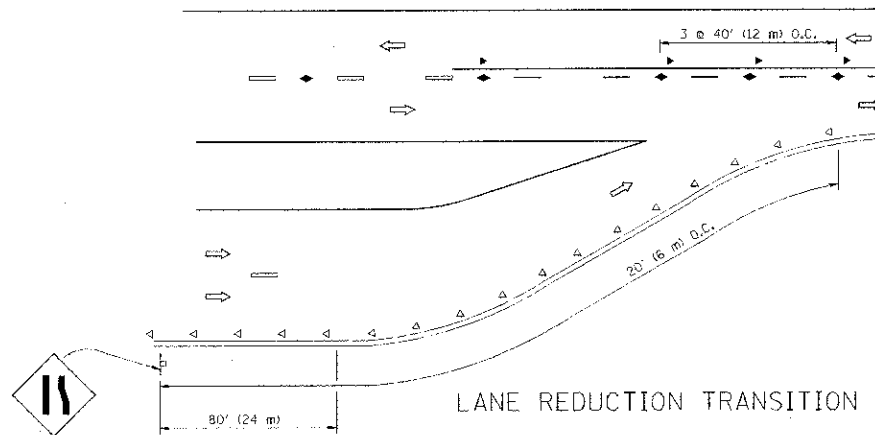
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SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT NO. 4003(087)

DISTRICT ONE		F.A.U. NO. =	SECTION	COUNTY	TOTAL SHEET NO. =
TYPICAL PAVEMENT MARKINGS		2777	09-00167-00-RS	COOK	31 / 21
SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT NO. 4003(087)

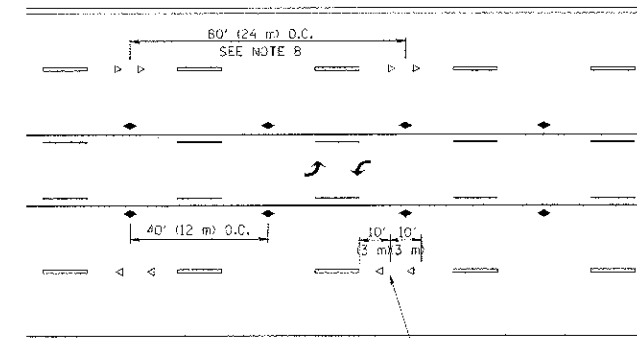


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

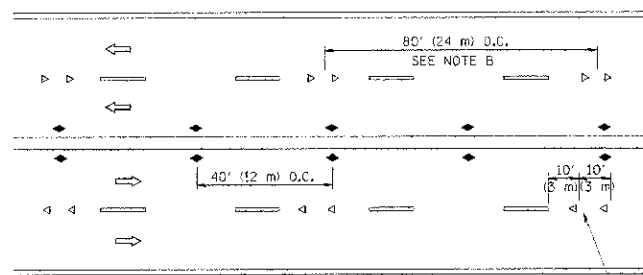
TWO-LANE/TWO-WAY



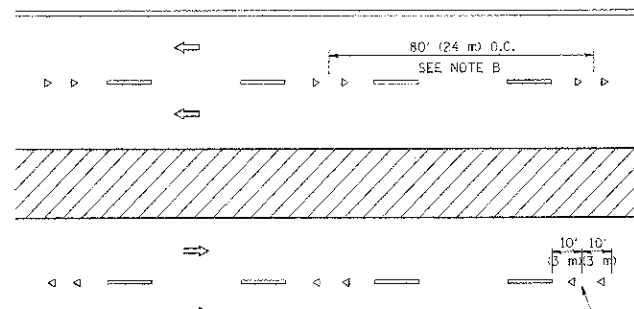
LANE REDUCTION TRANSITION



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.

SYMBOLS

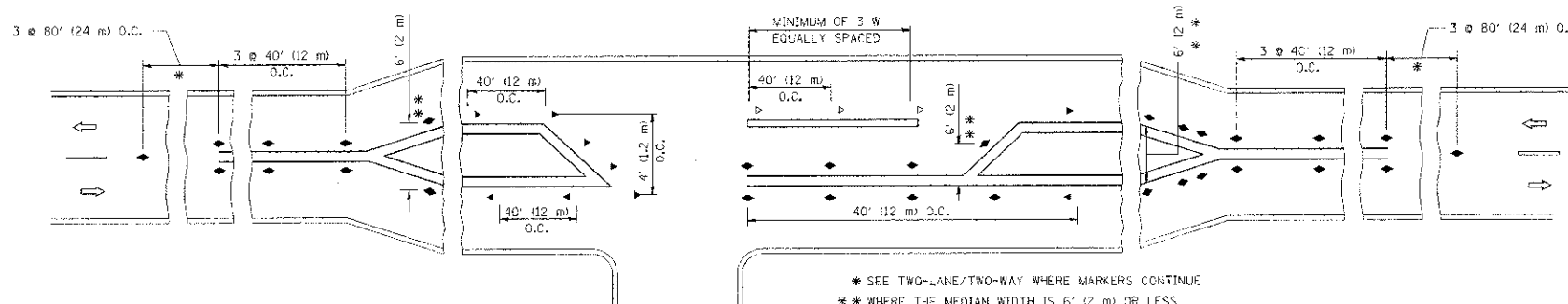
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◊ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

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. (16 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

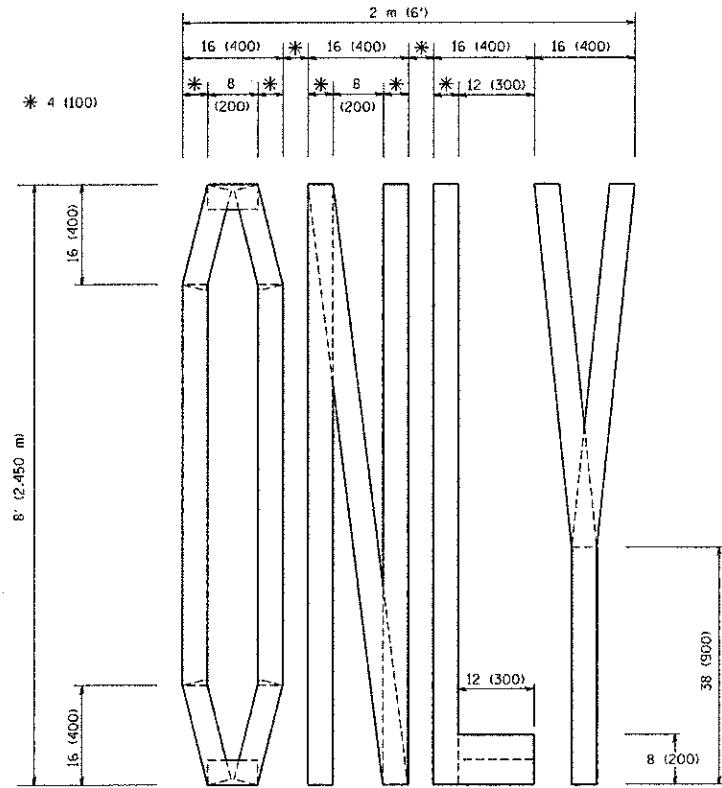
1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD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



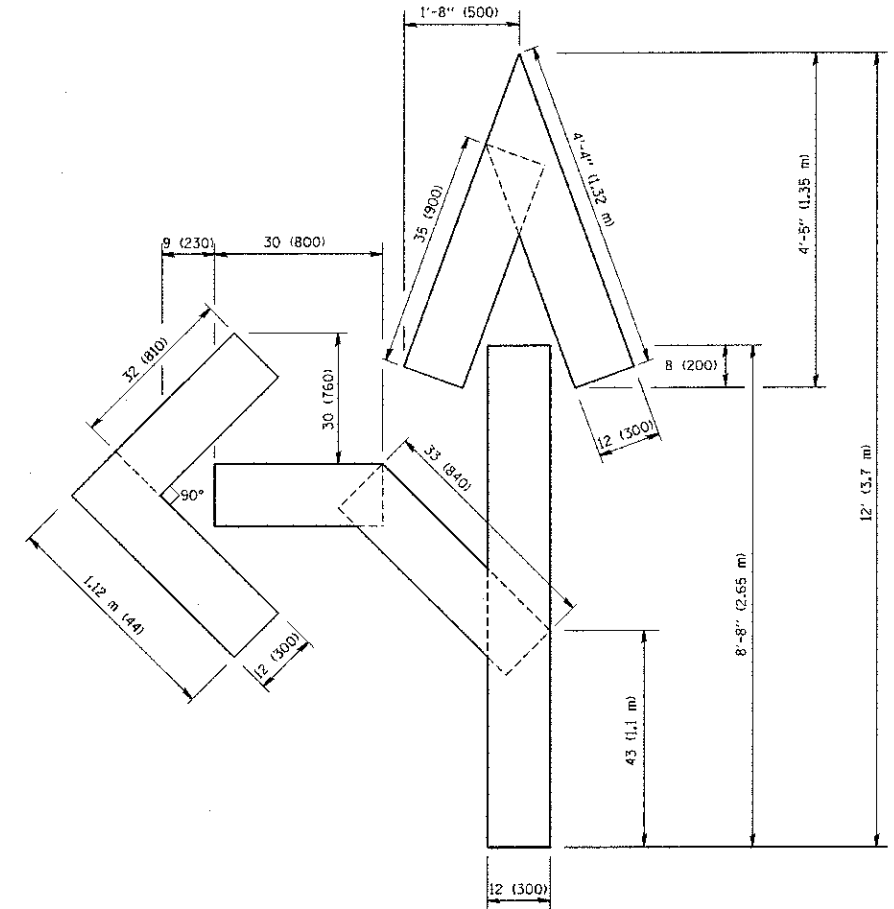
LEFT TURN

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

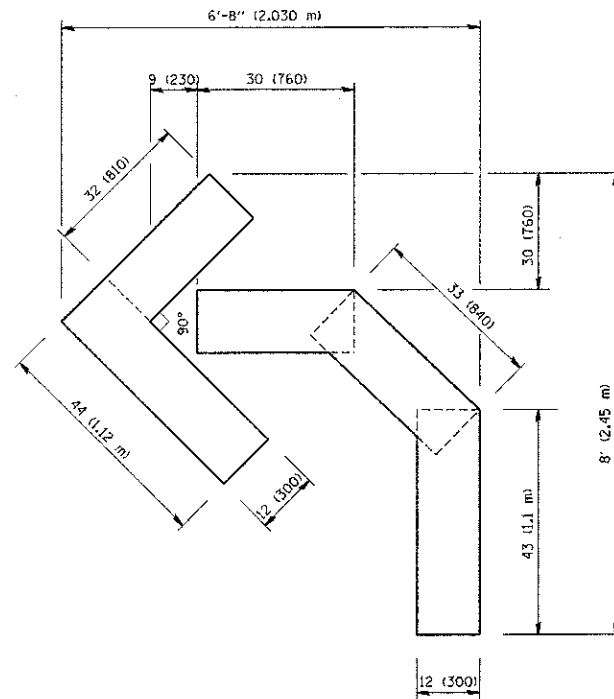
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		DRAWN -	REVISED - T. RAMMACHER 03-12-99		2779	09-00167-00-RS	COOK	31	22	
		CHECKED -	REVISED - T. RAMMACHER 01-06-00		TC-11		CONTRACT NO. 63837			
		DATE -	REVISED - C. JUCIUS 09-09-09		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS	FED. AID PROJECT M-4003(087)



QUANTITY
 4 (100) LINE = 64.1 ft. (19.7 m)
 21.1 sq. ft. (1.97 sq. m)



QUANTITY
 4 (100) LINE = 82.5 ft. (25.3 m)
 27.5 sq. ft. (2.53 sq. m)



QUANTITY
 4 (100) LINE = 45.5 ft. (13.9 m)
 15.2 sq. ft. (1.39 sq. m)

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

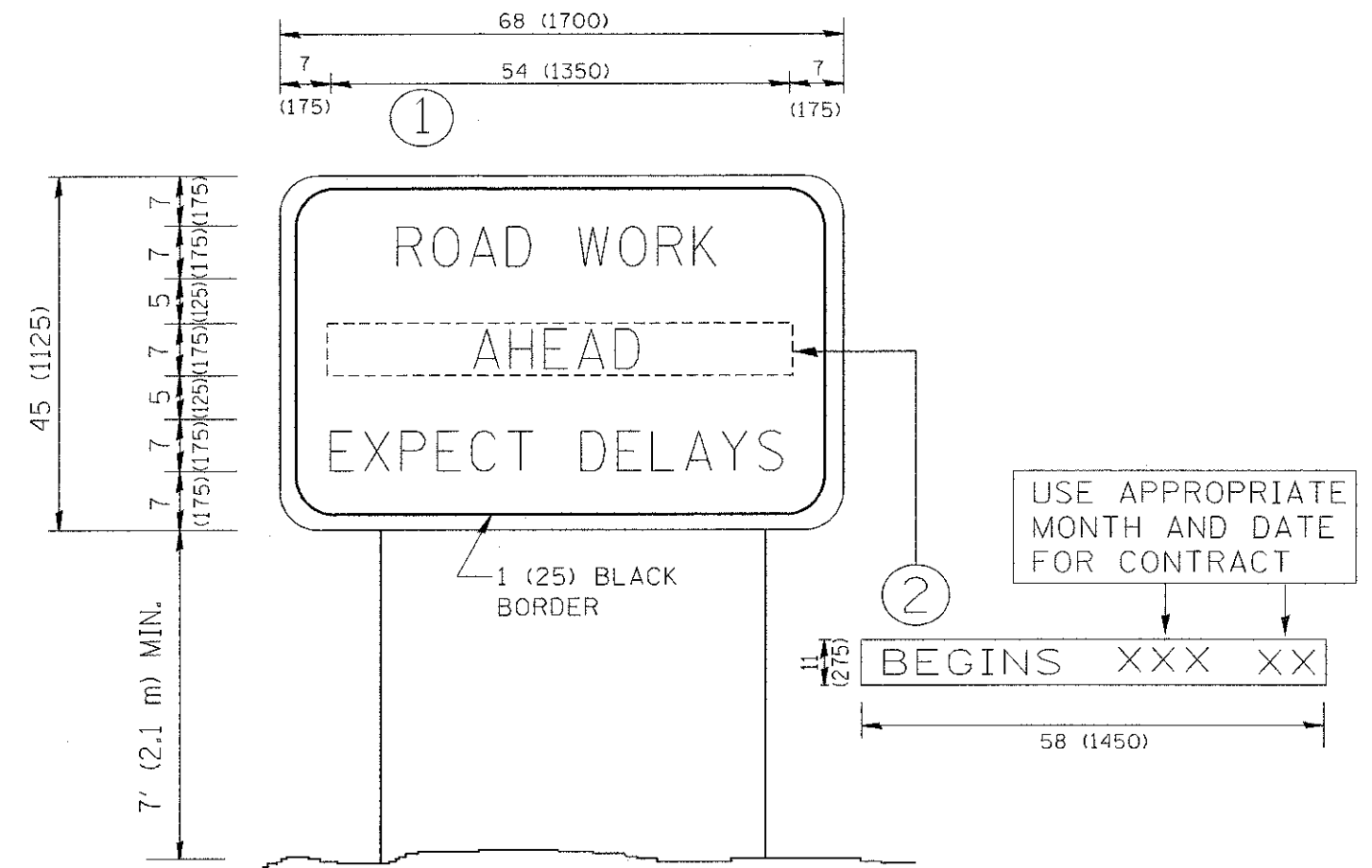
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	PLOT DATE = 1/4/2008	DATE - 09-18-94	REVISED -E. GOMEZ 08-28-00

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING LETTERS AND SYMBOLS
 FOR TRAFFIC STAGING

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE. 2779	SECTION 09-00167-00-RS	COUNTY COOK	TOTAL SHEETS 31	SHEET NO. 24
TC-16			CONTRACT NO. 63837	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(087)				



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

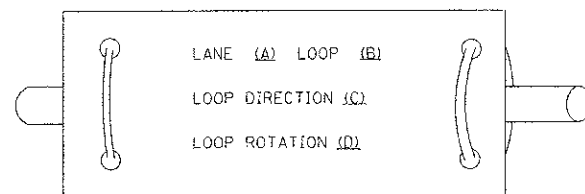
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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PLOT SCALE = 50,000 / IN.	CHECKED -	REVISED -	T. RAMMACHER 02-02-99	SCALE: NONE		SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	TC-22		CONTRACT NO. 63837	
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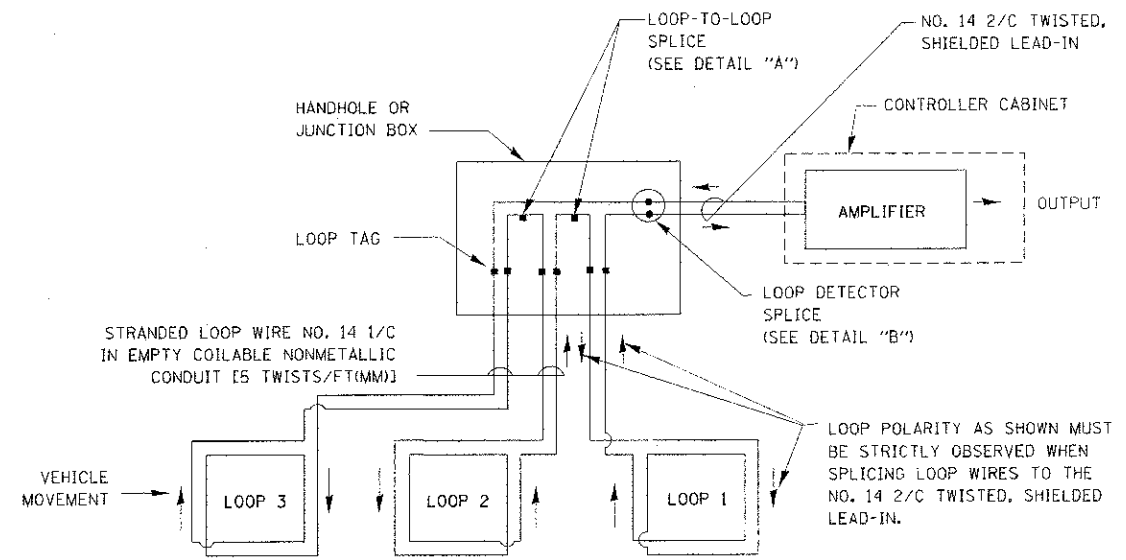
LOOP DETECTOR NOTES

- 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.
- 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.
- 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.
- ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVESHOLES 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.
- 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.
- 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

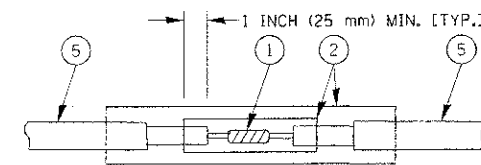


- LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

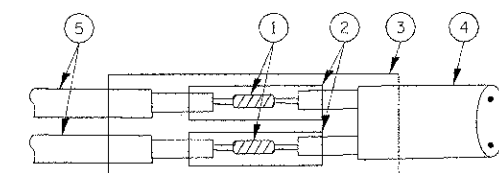


DETECTOR LOOP WIRING SCHEMATIC

- 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.

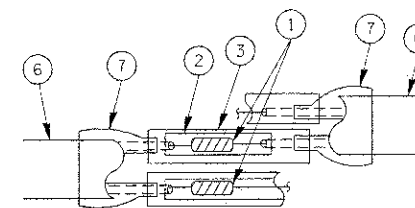


DETAIL "A"
LOOP-TO-LOOP SPLICE

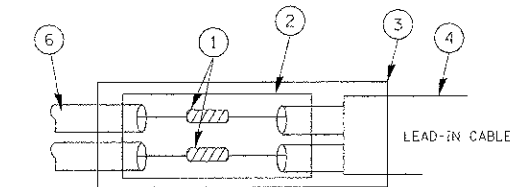


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE 1 LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

- WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- NO. 14 2/C TWISTED, SHIELDED CABLE.
- LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- PRE-FORMED LOOP
- XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

FILE NAME =	USER NAME = konthaphixaybo	DESIGNED - DAD	REVISED -
\\pwwork\pwwork\KANTHAPHIXAYBO\01126	\\traff\traff\jugand.v7.dgn	DRAWN - BCK	REVISED -
PLOT SCALE = 20.0200 * 1/16		CHECKED - DAD	REVISED -
PLOT DATE = 10/16/2009		DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

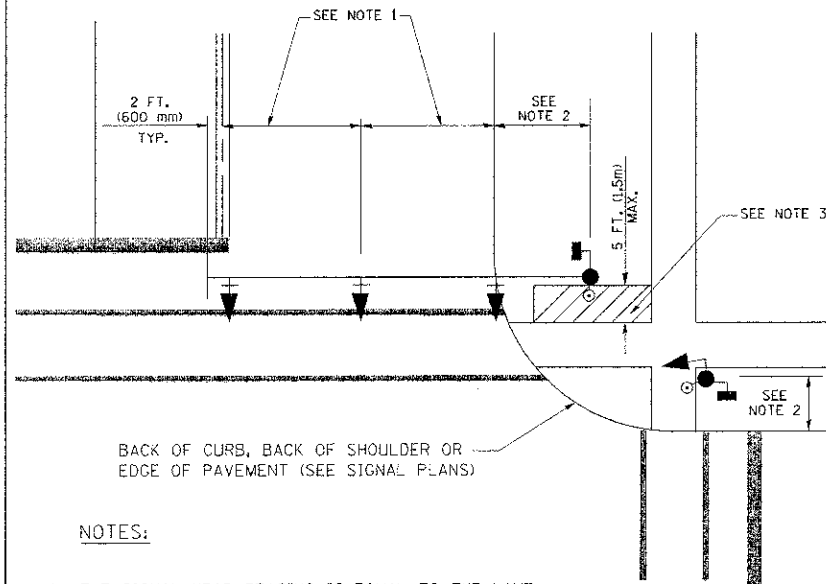
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: SHEET NO. 1 OF 6 SHEETS STA. TO STA.

F.A.U. RTE. 2779	SECTION 09-00167-00-RS	COUNTY COOK	TOTAL SHEETS 31	SHEET NO. 26
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT M-4003(087)		CONTRACT NO. 63837		

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

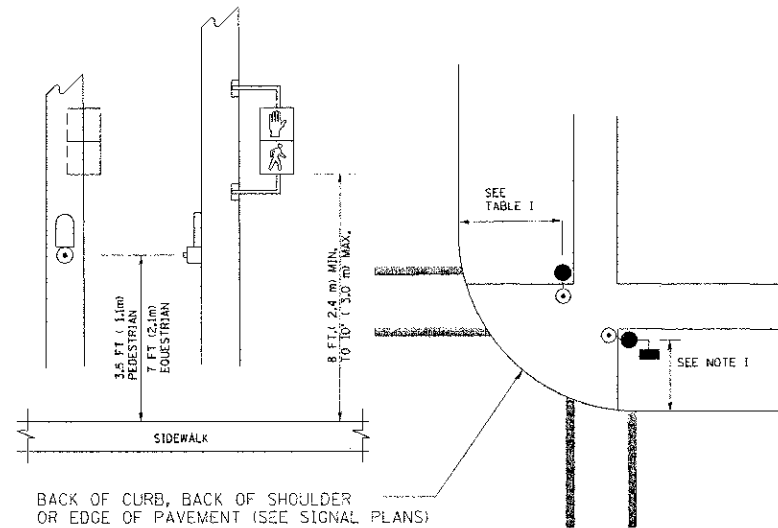
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA, INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



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."

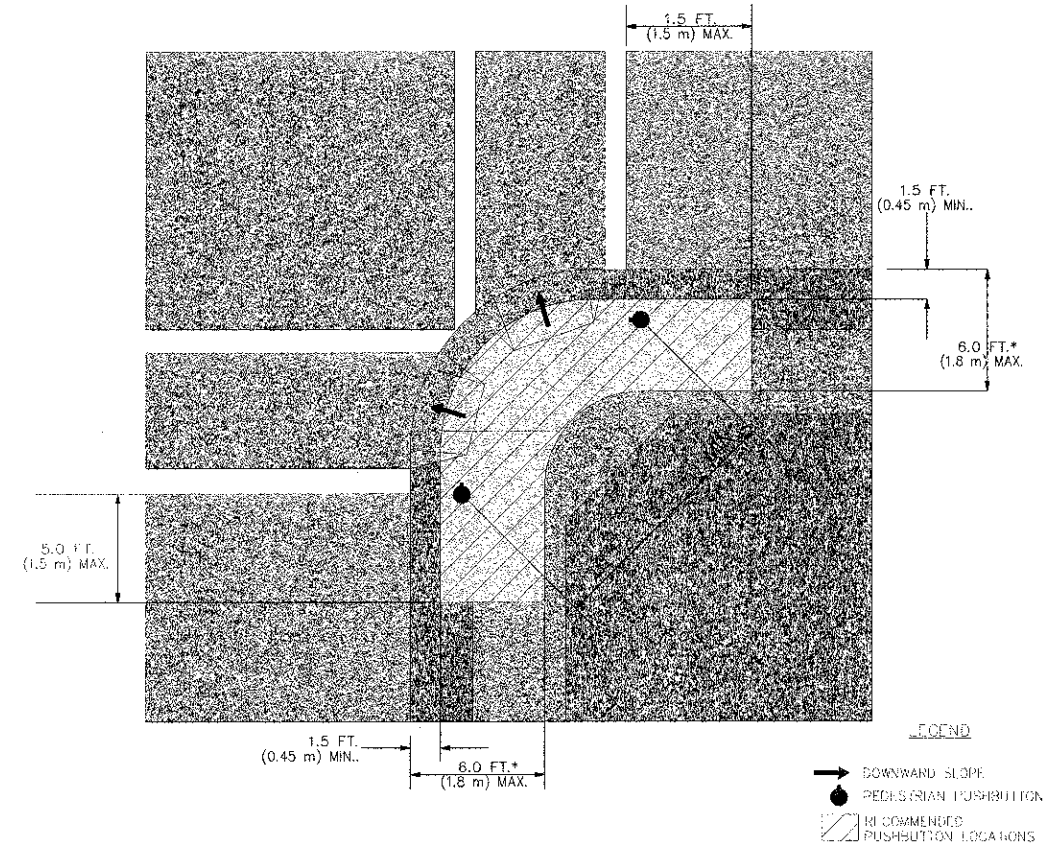
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



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:

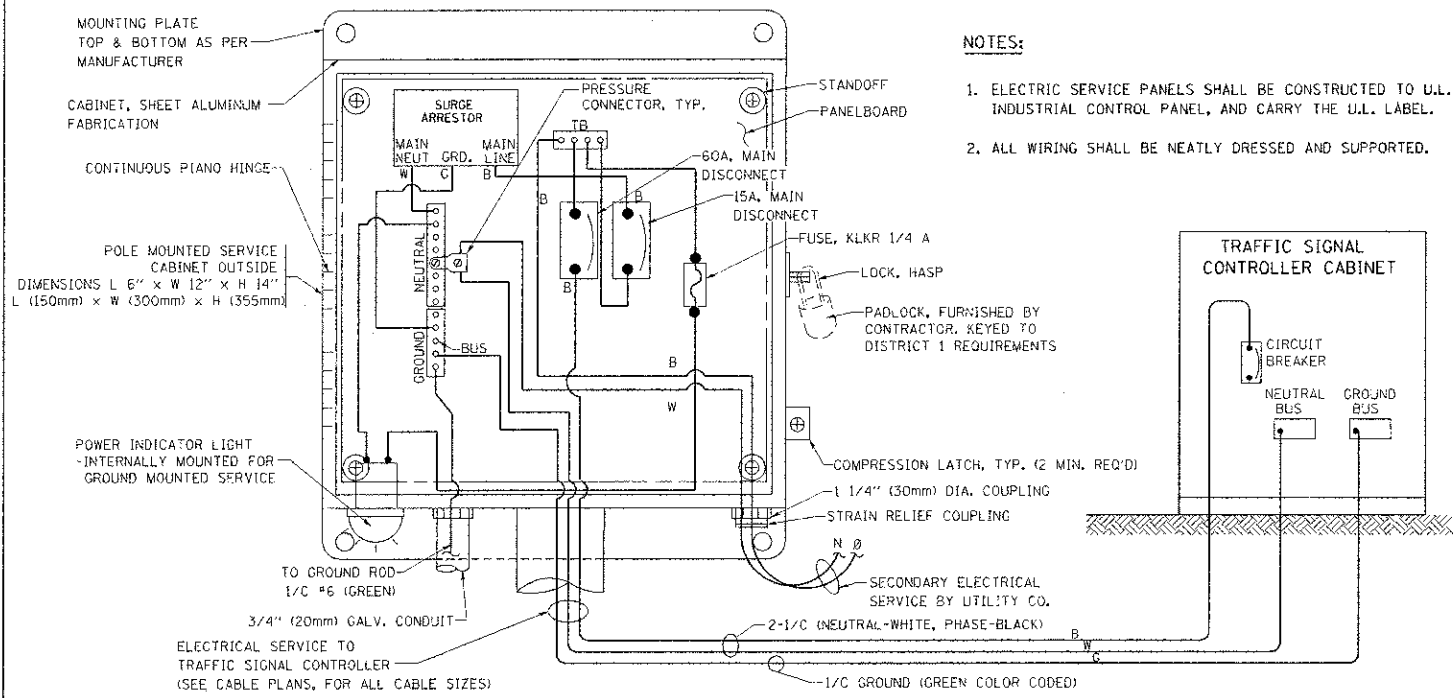
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM 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

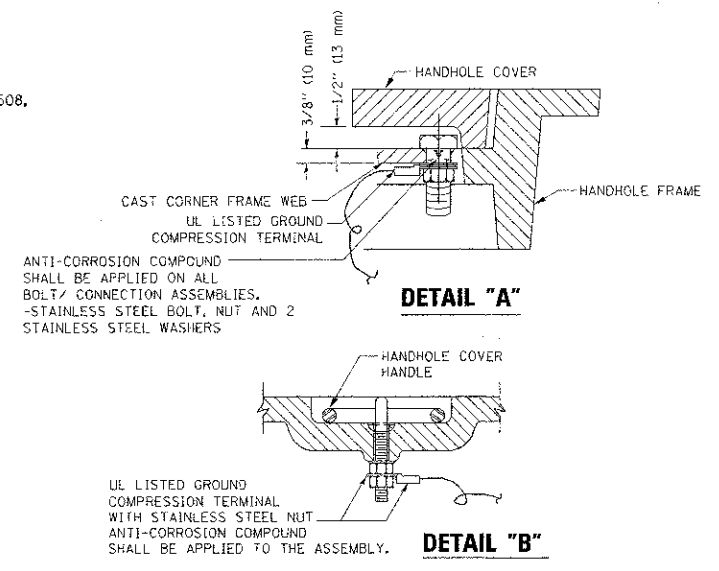
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 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:

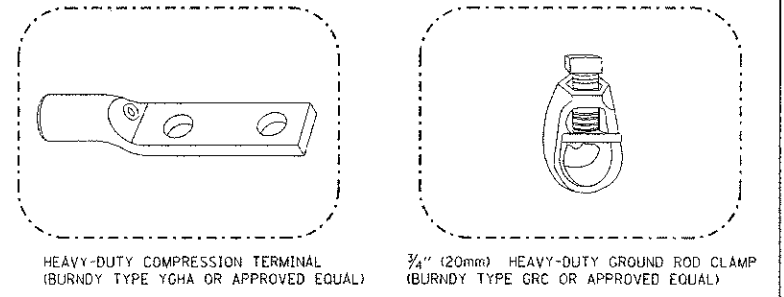
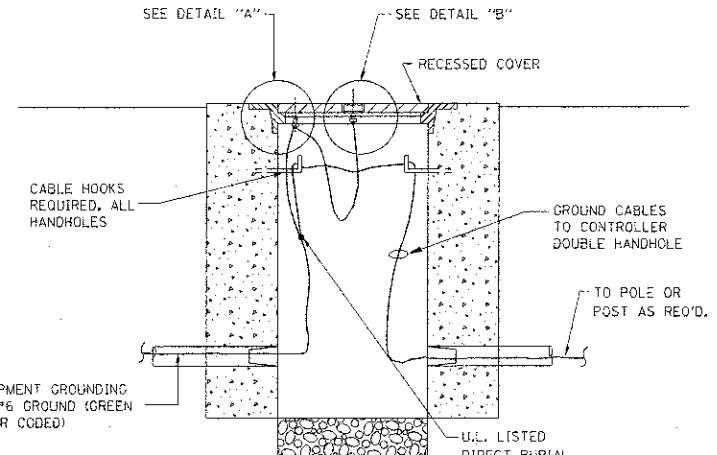
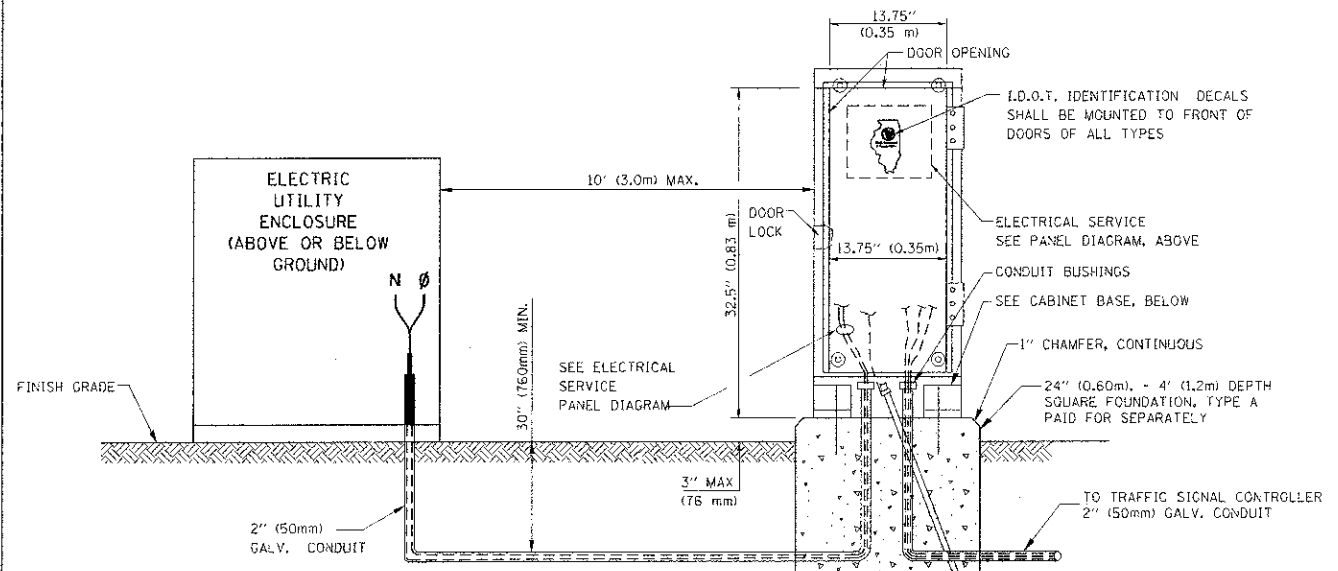
1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE 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.



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



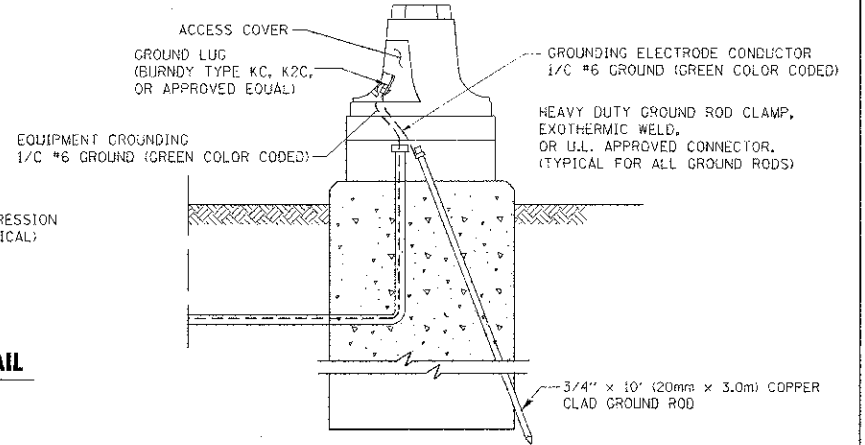
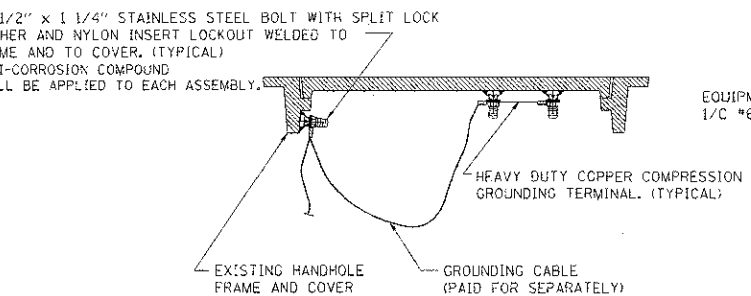
- NOTES:**
- GROUNDING SYSTEM**
- THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED 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.
 - 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.
 - ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
 - THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



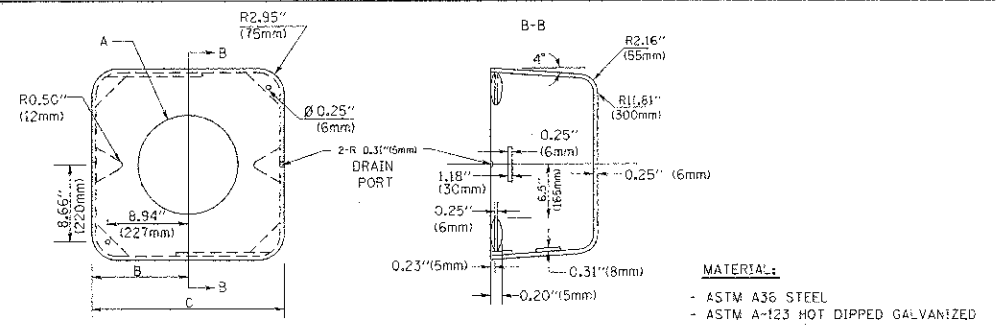
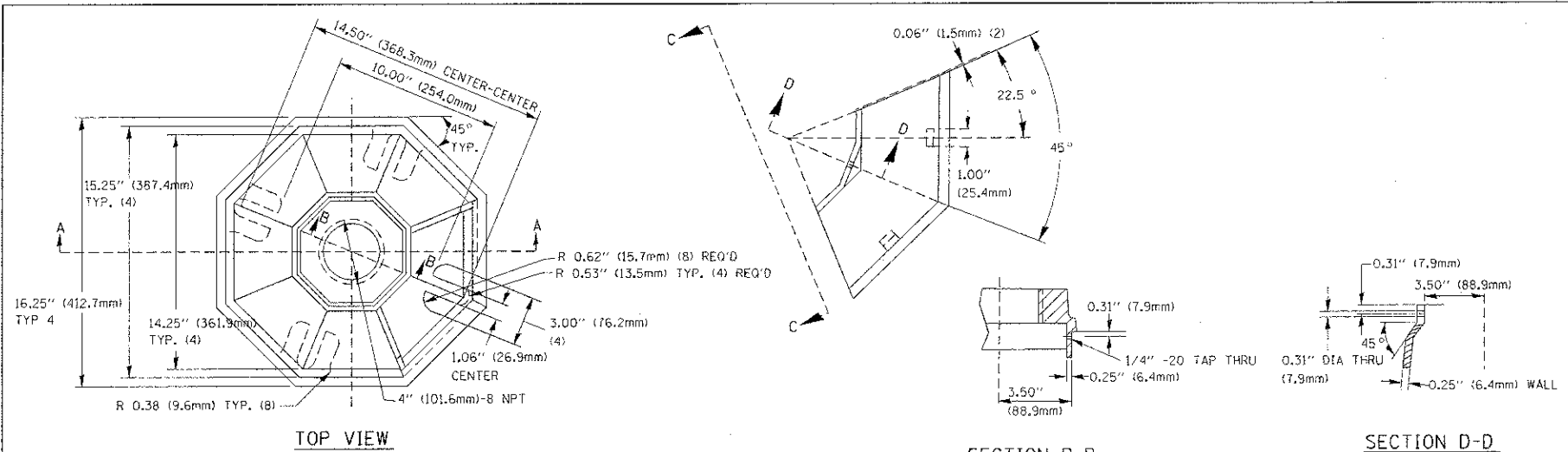
- NOTES:**
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
 - GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES. 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES. 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.

SERVICE INSTALLATION GROUND MOUNT
 (NOT TO SCALE)

CABINET - BASE BOLT PATTERN
 (NOT TO SCALE)



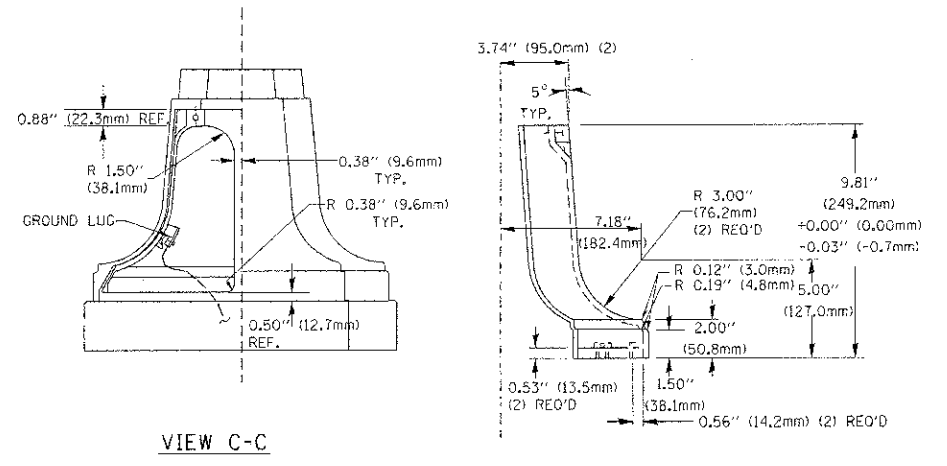
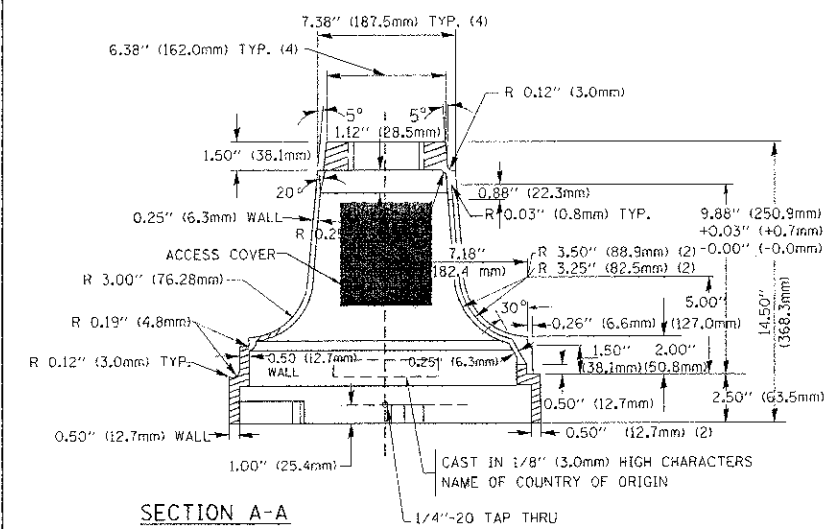
FILE NAME =	USER NAME = santhaphaybo	DESIGNED - DAD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS	F.A.U. R.T.E. = 2779	SECTION = 09-00167-00-RS	COUNTY = COOK	TOTAL SHEETS = 31	SHEET NO. = 28
PLT SCALE = 20,0000' / 1" IN.	CHECKED - DAD	REVISED -	CONTRACT NO. = 63837							
PLT DATE = 10/16/2009	DATE = 10/28/09	REVISED -	FED. ROAD DIST. NO. = ILLINOIS FED. AID PROJECT M-4003(087)							
			SCALE: SHEET NO. 3 OF 6 SHEETS STA. TO STA.							



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

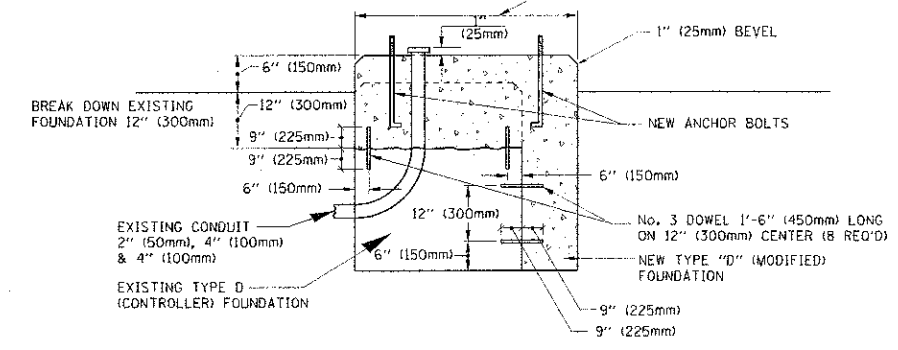
SHROUD

- 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 VERIFY 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.

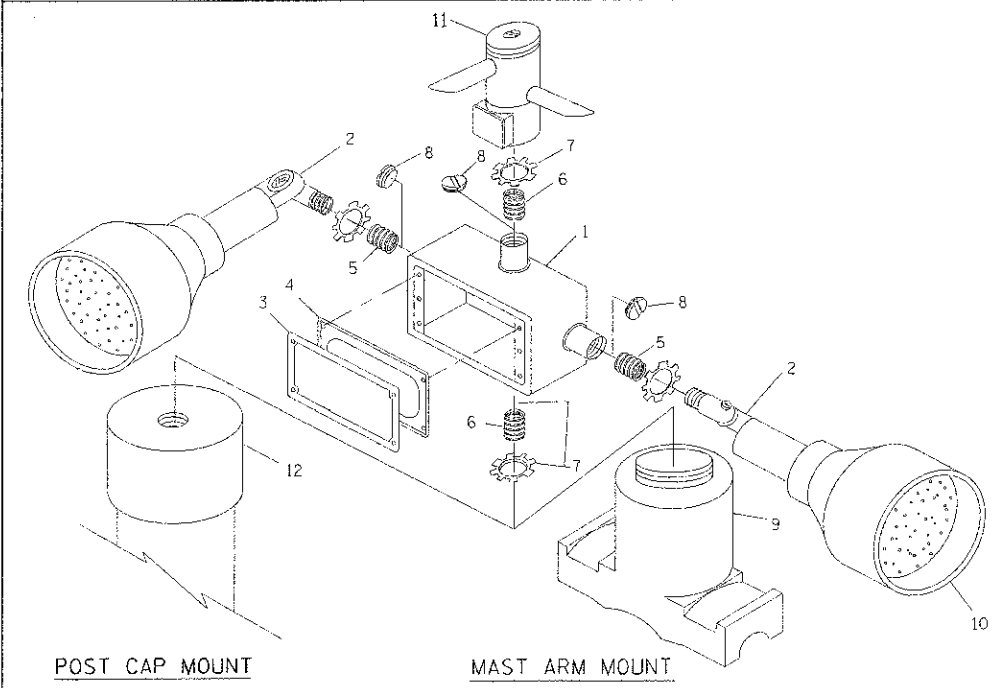


TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A

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

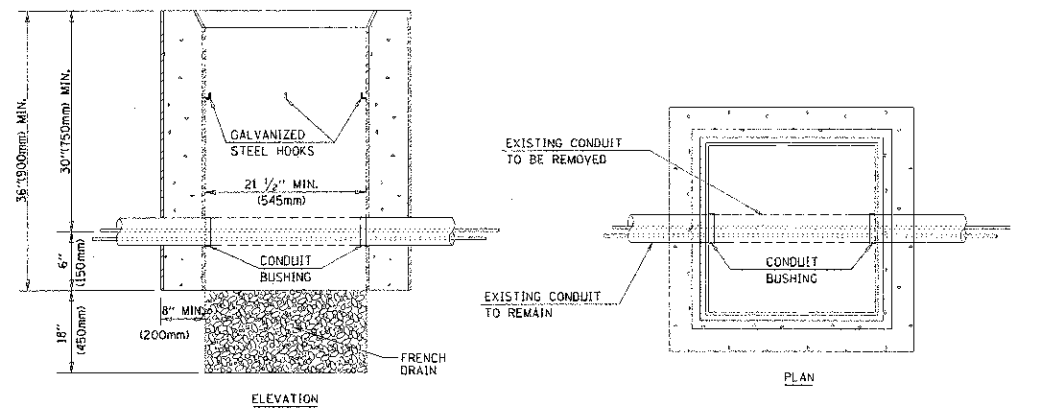


MODIFY EXISTING TYPE "D" FOUNDATION



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	3/4\" (19 mm) CLOSE NIPPLE
7	3/4\" (19 mm) LOCKNUT
8	3/4\" (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-0-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 INCIDENTAL TO THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT

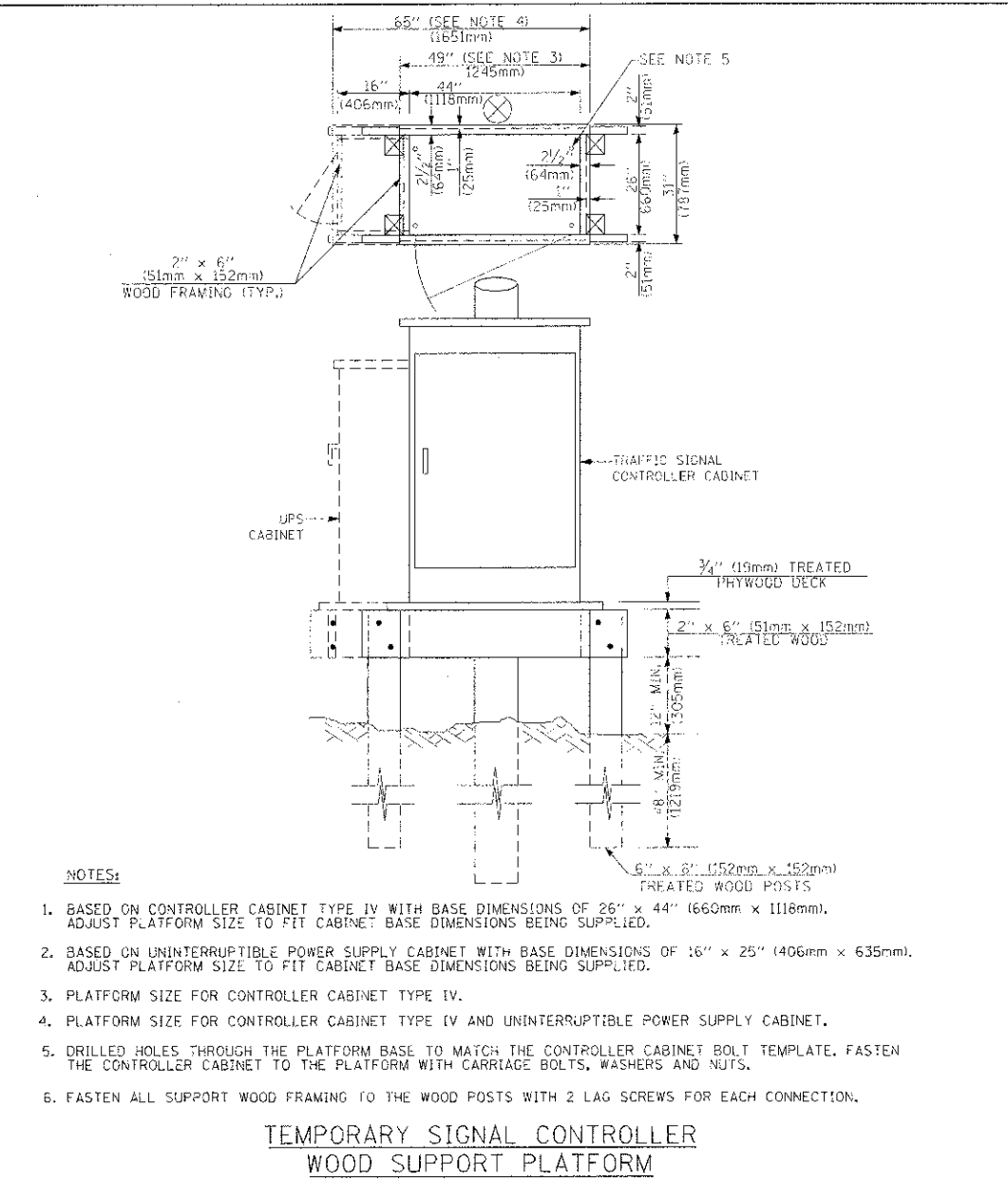
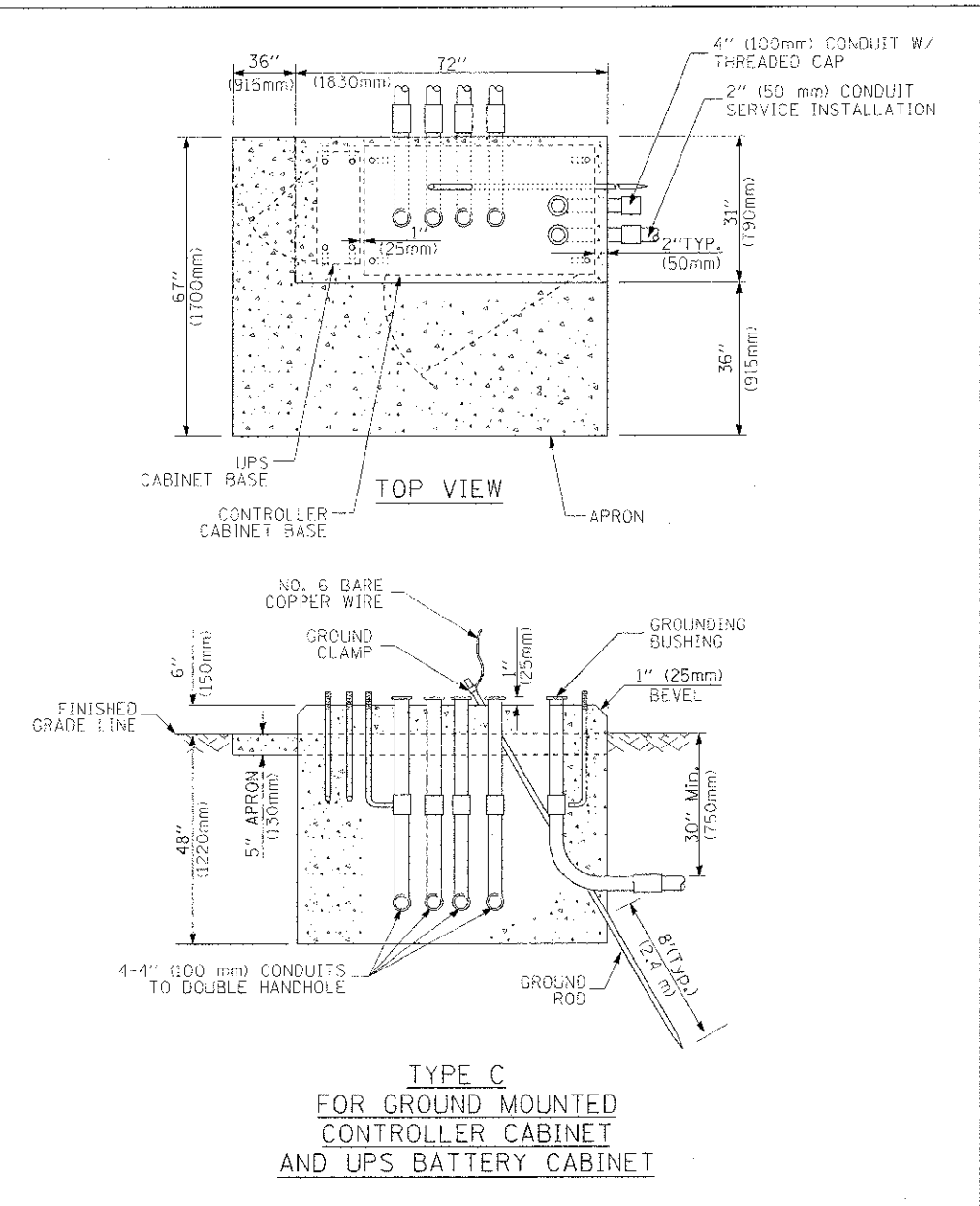
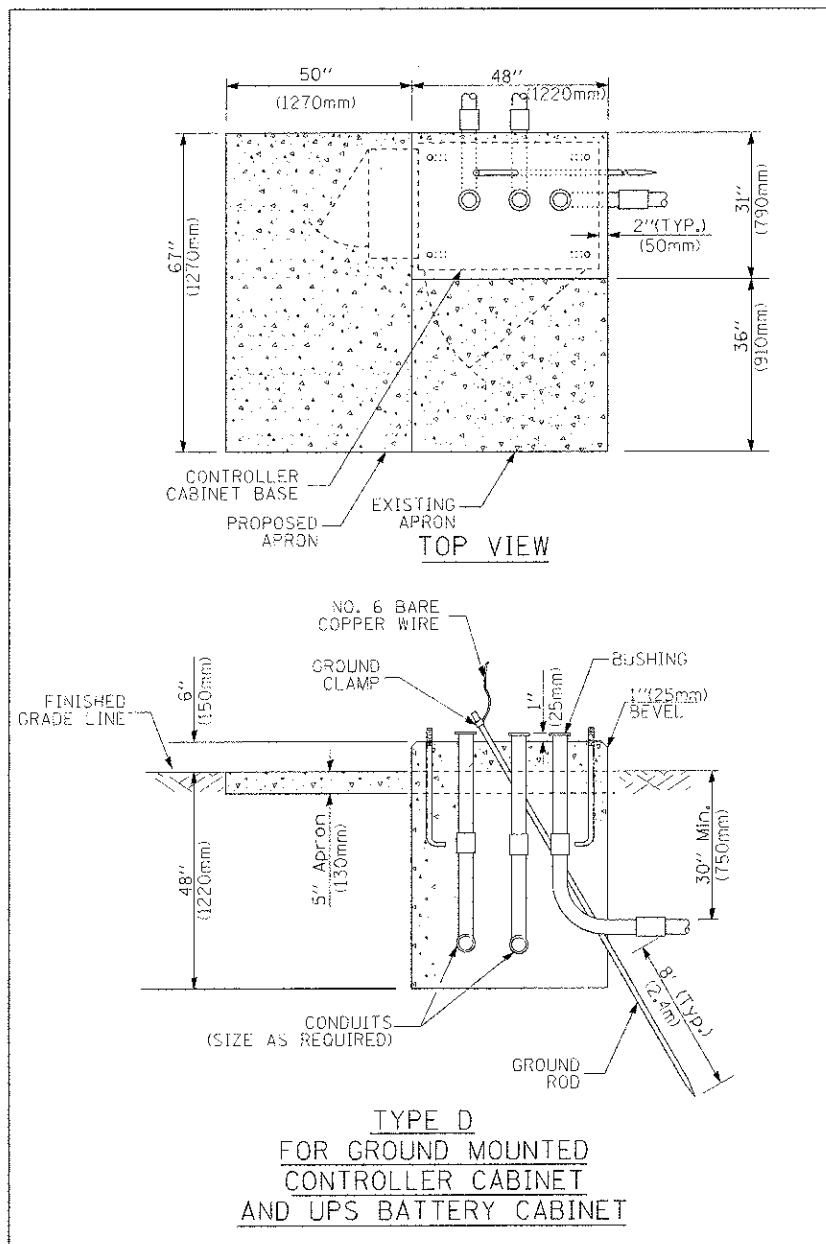
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PROJECT NO. = 10/001001	DATE OF PLOT = 10/28/09	DRAWN - BCK	REVISED -
PLOT SCALE = 22.0000 / IN.	CHECKED - DAD	DATE = 10/28/09	REVISED -
PLOT DATE = 10/28/09	DATE = 10/28/09		REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

F.A.U. RITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2779	09-00167-00-RS	COOK	31	29
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT M-4003(087)		

SCALE: SHEET NO. 4 OF 6 SHEETS STA. TO STA.



- 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.

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

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

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)

MAST ARM LENGTH	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)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and up to 56' (16.8 m) and less than 65' (19.8 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 (C_u) > 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.

CABLE SLACK

VERTICAL CABLE LENGTH

DEPTH OF FOUNDATION

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE			
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE			
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA			
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED			
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F			
UNINTERRUPTIBLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F 5M12F			
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)				FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)			
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE			
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED			
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM				ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM				STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED			
SIGNAL POST				REMOVE ITEM				SIGNAL POST AND FOUNDATION TO BE REMOVED			
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM				INTERSECTION & SAMPLING (SYSTEM) DETECTOR			
GUY WIRE				ABANDON ITEM				SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				EXISTING INTERSECTION LOOP DETECTOR			
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				EXISTING PREFORMED INTERSECTION LOOP DETECTOR			
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD				PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED				PREFORMED SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID				RAILROAD SYMBOLS			
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER				EXISTING		PROPOSED	
ILLUMINATED SIGN "NO LEFT TURN"				RADIO INTERCONNECT				RAILROAD CONTROL CABINET			
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO REPEATER				RAILROAD CANTILEVER MAST ARM			
DETECTOR LOOP, TYPE I				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED				FLASHING SIGNAL			
PREFORMED DETECTOR LOOP				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)				CROSSING GATE			
MICROWAVE VEHICLE SENSOR								CROSSBUCK			
VIDEO DETECTION CAMERA											
VIDEO DETECTION ZONE											
PAN, TILT, ZOOM CAMERA											
WIRELESS DETECTOR SENSOR											
WIRELESS ACCESS POINT											