

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
TRAFFIC SIGNAL PLANS**

REMINGTON BLVD AT SCHMIDT ROAD

SECTION 09-00052-00-TL

PROJECT ARA-9003(438)

TRAFFIC SIGNAL INSTALLATION

VILLAGE OF BOLINGBROOK

WILL COUNTY

C-91-877-09

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00052-00-TL	WILL	10	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 63312		

INDEX OF SHEETS

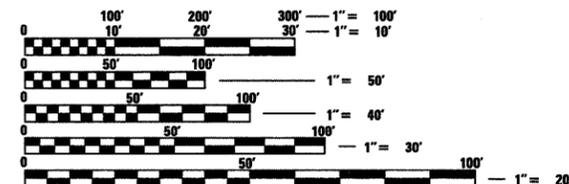
1. COVER SHEET
2. NOTES AND SUMMARY OF QUANTITIES
3. TRAFFIC SIGNAL PLANS
4. TRAFFIC SIGNAL CABLE PLAN
5. MISCELLANEOUS DETAILS
- 6-8. DISTRICT ONE STANDARD
9. TRAFFIC SIGNAL DESIGN DETAILS
10. GENERAL CONSTRUCTION STANDARDS
PAVEMENT STANDARDS

HIGHWAY STANDARDS

THE FOLLOWING ILLINOIS DEPARTMENT OF TRANSPORTATION HIGHWAY STANDARDS SHALL APPLY TO THIS PROJECT:

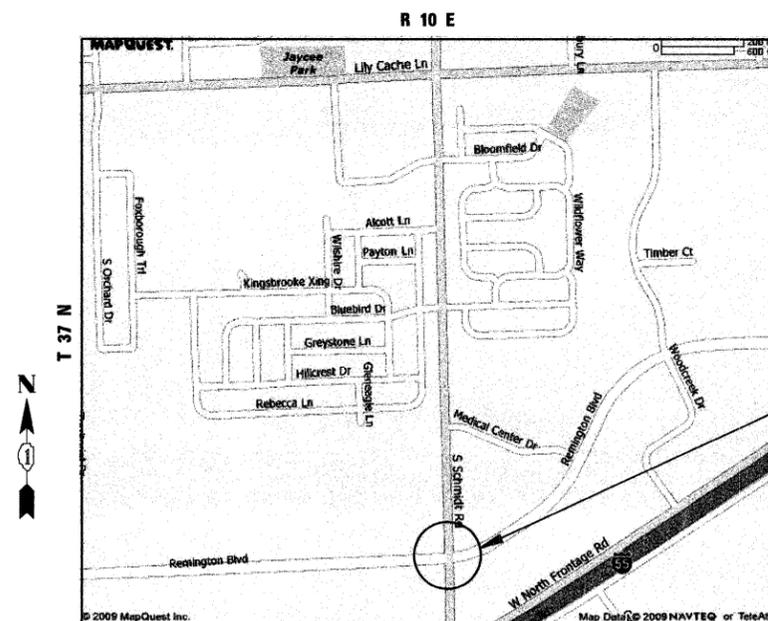
- 000001-05 - STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 424001-05 - CURB RAMPS FOR SIDEWALKS
- 701301-03 - LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701701-06 - URBAN LANE CLOSURE, MULTILANE INTERSECTION
- 701801-04 - LANE CLOSURE, MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
- 701901-01 - TRAFFIC CONTROL DEVICES
- 814001-02 - HANDHOLES
- 814006-02 - DOUBLE HANDHOLES
- 857001-01 - STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
- 862001-01 - UNINTERRUPTABLE POWER SUPPLY
- 873001-02 - TRAFFIC SIGNAL GROUNDING & BONDING
- 876001-01 - PEDESTRIAN PUSH BUTTON POST
- 877011-04 - STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
- 878001-08 - CONCRETE FOUNDATION DETAILS

TRAFFIC DATA
2029 ADT = 33,400
SPEED LIMIT = 45 MPH



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.

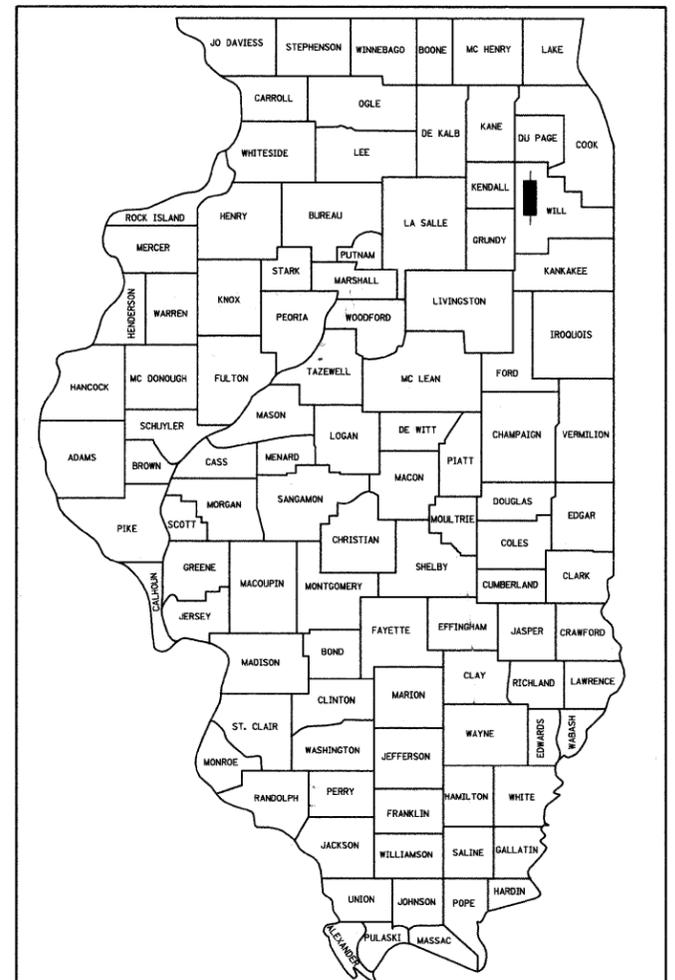
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811



DU PAGE TOWNSHIP

LOCATION MAP
(NOT TO SCALE)

GROSS LENGTH OF PROJECT = 125 FEET
NET LENGTH OF PROJECT = 125 FEET



LOCATION OF SECTION INDICATED THUS: - [black rectangle] -

PROJECT LOCATION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Approved September 30, 2009
Paul C. Blair
Mayor, Village of Bolingbrook

Passed OCTOBER 26, 2009
Christy Anisette Holt
District 1 Engineer of Local Roads & Streets

Releasing for Bid
Based on Limited
Review OCTOBER 26, 2009
Diane M. O'Keefe
Deputy Director of Highways, Region 1 Engineer



PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

CONTRACT NO. 63312

FIELD ENGINEER: MELCHOR MANGOBA 847-705-4408
CONSULTANTS: HOMER L. CHASTAIN & ASSOCIATES, LLP 773-714-0050
CONTACT ENGINEER: DUANE O'LAUGHLIN

SUMMARY OF QUANTITIES

CODE	ITEM	UNIT	QUANTITY	Y031-IF
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	197	197
42400800	DETECTABLE WARNINGS	SQ FT	12	12
44000600	SIDEWALK REMOVAL	SQ FT	101	101
44001700	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	4	4
67100100	MOBILIZATION	L SUM	1	1
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1
78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	605	605
78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	146	146
80500500	SERVICE INSTALLATION, TYPE E	EACH	1	1
81000500	CONDUIT IN TRENCH, 1 1/2" DIA., GALVANIZED STEEL	FOOT	21	21
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	60	60
81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	44	44
81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	14	14
81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	227	227
81019000	CONDUIT PUSHED, 5" DIA., GALVANIZED STEEL	FOOT	121	121
81400100	HANDHOLE	EACH	3	3
81400300	DOUBLE HANDHOLE	EACH	1	1
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	132	132
85700300	FULL-ACTUATED CONTROLLER AND TYPE V CABINET	EACH	1	1
85900100	TRANSCEIVER	EACH	3	3
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	2,503	2,503
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	2,710	2,710
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1,709	1,709
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2,063	2,063
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	51	51

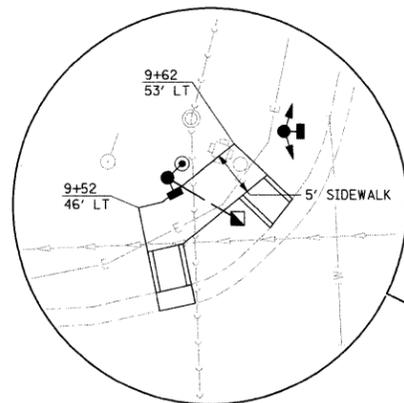
CODE	ITEM	UNIT	QUANTITY	Y031-IF
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	4	4
87600100	PEDESTRIAN PUSH-BUTTON POST, TYPE I	EACH	1	1
87702870	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 28 FT.	EACH	1	1
87702930	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 40 FT.	EACH	2	2
87702950	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT.	EACH	1	1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	16	16
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4	4
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	60	60
87900100	DRILL EXISTING FOUNDATION	EACH	1	1
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4	4
88040160	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	5	5
88040260	SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 1-3-SECTION, 1-5-SECTION, BRACKET MOUNTED	EACH	4	4
88102710	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED	EACH	8	8
88200100	TRAFFIC SIGNAL BACKPLATE	EACH	9	9
88800100	PEDESTRIAN PUSH-BUTTON	EACH	8	8
89502200	MODIFY EXISTING CONTROLLER	EACH	1	1
89502500	REMOVE TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1	1
X0320872	VIDEO VEHICLE DETECTION SYSTEM	EACH	1	1
X8620020	UNINTERRUPTIBLE POWER SUPPLY	EACH	1	1
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	674	674
X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	231	231
X8950100	RELOCATE EXISTING MASTER CONTROLLER	EACH	1	1
XX003163	EMERGENCY VEHICLE PRIORITY SYSTEM	EACH	1	1
XX005428	INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4	4
XX006597	WIRELESS INTERCONNECT SYSTEM	L SUM	1	1
XX006863	ANTENNA, YAGI, 900MHZ	EACH	1	1

• SPECIALTY ITEMS

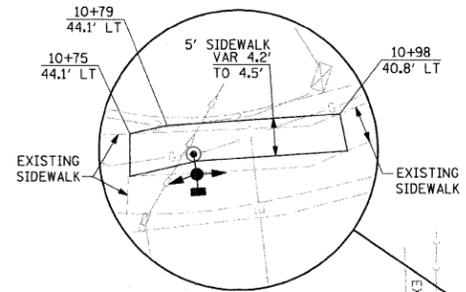
NOTES:

1. THE 12 FOOT VIDEO ARM SHALL BE ORIENTED IN THE SAME DIRECTION AS THE MAST ARM.
2. QUANTITIES OF PUSHED CONDUIT AND ELECTRICAL CABLE ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL LENGTHS AND SHALL INSTALL RACEWAYS IN COMPLETE CONFORMANCE WITH THE SPECIFIED REQUIREMENTS.
3. THE ELECTRICAL WORK SHALL BE IN CONFORMANCE WITH THE NATION AND LOCAL ELECTRICAL CODES. U.L. CERTIFICATION IS NOT REQUIRED.

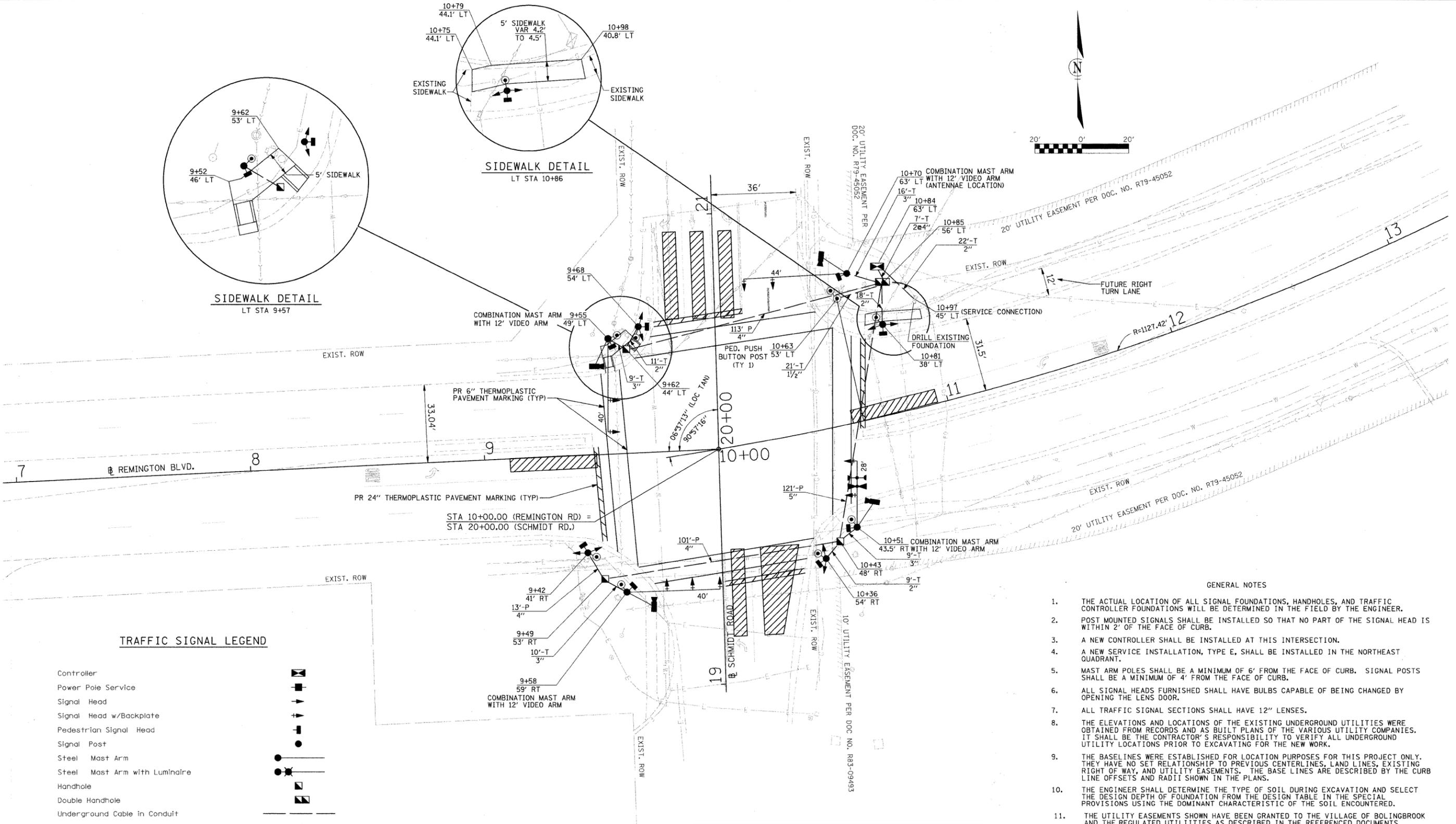
FILE NAME =	USER NAME = #USER#	DESIGNED - WTS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#	PLOT SCALE = #SCALE#	DRAWN - DLB	REVISED -		REMINGTON BLVD & SCHMIDT ROAD				09-00052-00-TL	WILL	10	2
	PLOT DATE = 9/28/2009	CHECKED - DJ	REVISED -		SCALE: 1"=20'	SHEET NO. 2 OF 10 SHEETS	STA.	TO STA.	CONTRACT NO. 63312			
		DATE - 8/09	REVISED -		ILLINOIS FED. AID PROJECT							



SIDWALK DETAIL
LT STA 9+57



SIDWALK DETAIL
LT STA 10+86



TRAFFIC SIGNAL LEGEND

- Controller
- Power Pole Service
- Signal Head
- Signal Head w/Backplate
- Pedestrian Signal Head
- Signal Post
- Steel Mast Arm
- Steel Mast Arm with Luminaire
- Handhole
- Double Handhole
- Underground Cable in Conduit
- Priority Veh. Detector
- Confirmation Beacon
- Video Vehicle Sensor
- Video Detection Zone
- Pedestrian Push Button

GENERAL NOTES

1. THE ACTUAL LOCATION OF ALL SIGNAL FOUNDATIONS, HANDHOLES, AND TRAFFIC CONTROLLER FOUNDATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. POST MOUNTED SIGNALS SHALL BE INSTALLED SO THAT NO PART OF THE SIGNAL HEAD IS WITHIN 2' OF THE FACE OF CURB.
3. A NEW CONTROLLER SHALL BE INSTALLED AT THIS INTERSECTION.
4. A NEW SERVICE INSTALLATION, TYPE E, SHALL BE INSTALLED IN THE NORTHEAST QUADRANT.
5. MAST ARM POLES SHALL BE A MINIMUM OF 6' FROM THE FACE OF CURB. SIGNAL POSTS SHALL BE A MINIMUM OF 4' FROM THE FACE OF CURB.
6. ALL SIGNAL HEADS FURNISHED SHALL HAVE BULBS CAPABLE OF BEING CHANGED BY OPENING THE LENS DOOR.
7. ALL TRAFFIC SIGNAL SECTIONS SHALL HAVE 12" LENSES.
8. THE ELEVATIONS AND LOCATIONS OF THE EXISTING UNDERGROUND UTILITIES WERE OBTAINED FROM RECORDS AND AS BUILT PLANS OF THE VARIOUS UTILITY COMPANIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL UNDERGROUND UTILITY LOCATIONS PRIOR TO EXCAVATING FOR THE NEW WORK.
9. THE BASELINES WERE ESTABLISHED FOR LOCATION PURPOSES FOR THIS PROJECT ONLY. THEY HAVE NO SET RELATIONSHIP TO PREVIOUS CENTERLINES, LAND LINES, EXISTING RIGHT OF WAY, AND UTILITY EASEMENTS. THE BASE LINES ARE DESCRIBED BY THE CURB LINE OFFSETS AND RADII SHOWN IN THE PLANS.
10. THE ENGINEER SHALL DETERMINE THE TYPE OF SOIL DURING EXCAVATION AND SELECT THE DESIGN DEPTH OF FOUNDATION FROM THE DESIGN TABLE IN THE SPECIAL PROVISIONS USING THE DOMINANT CHARACTERISTIC OF THE SOIL ENCOUNTERED.
11. THE UTILITY EASEMENTS SHOWN HAVE BEEN GRANTED TO THE VILLAGE OF BOLINGBROOK AND THE REGULATED UTILITIES AS DESCRIBED IN THE REFERENCED DOCUMENTS.

RESTORATION OF THE WORK AREA SHALL BE INCIDENTAL TO THE RELATED ITEMS AND SHALL BE REPLACED IN KIND. ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS 252 AND 250, RESPECTIVELY.

FILE NAME = TrafficSignalPlan.dgn	USER NAME = dwoznarski	DESIGNED - WTS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL PLANS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN - DLB	REVISED -		REMINGTON BLVD & SCHMIDT ROAD				09-00052-00-TL	WILL	10	3	
		CHECKED - DJ	REVISED -		SCALE: 1"=20' SHEET NO. 3 OF 10 SHEETS STA. TO STA.								
		DATE - 8/09	REVISED -		ILLINOIS FED. AID PROJECT								

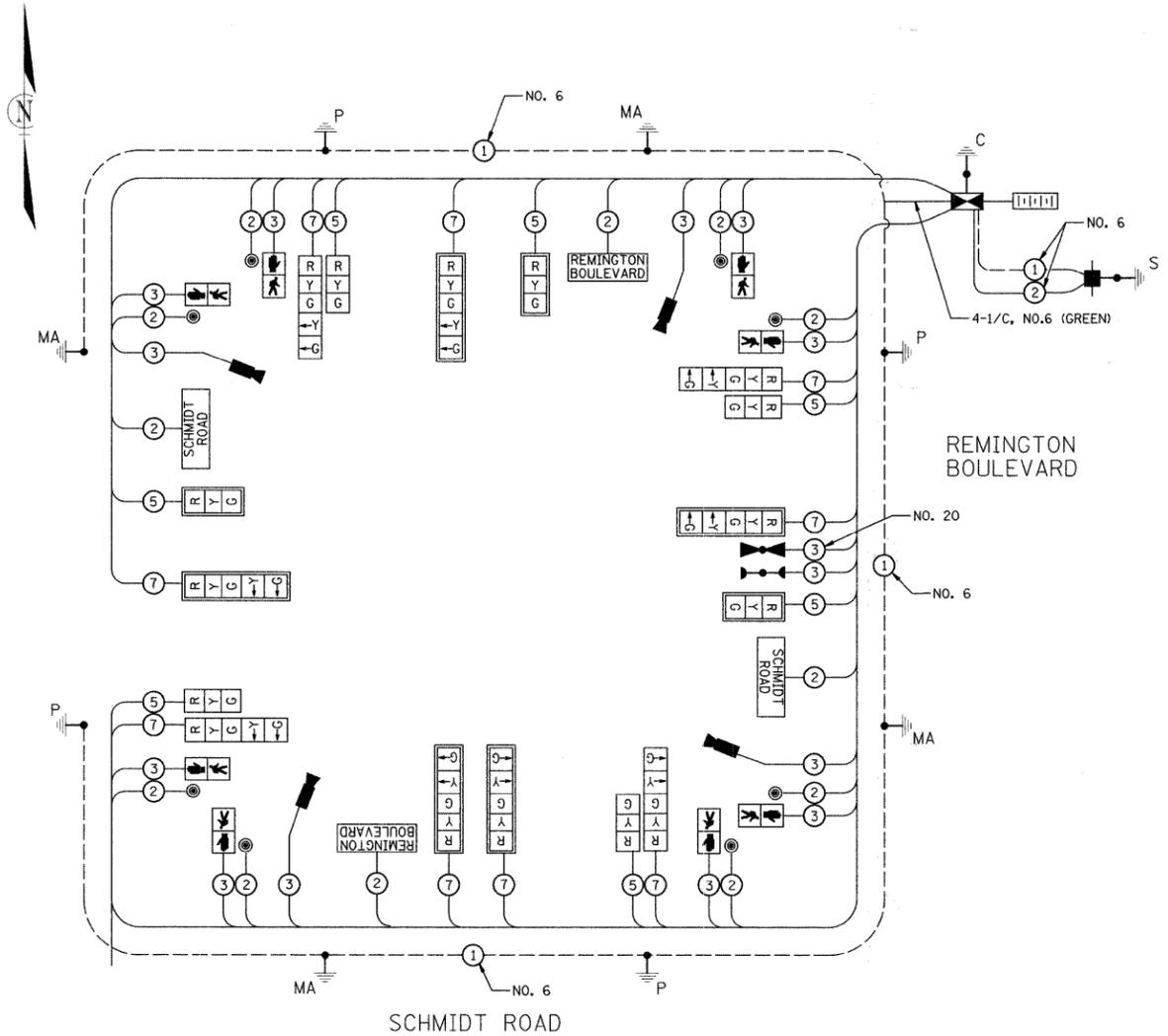
CABLE PLAN LEGEND

- Signal Section 300 mm (12")
- Controller
- Power Pole Service
- Priority Veh. Detector
- Confirmation Beacon
- Cable Number

- Signal Face with Backplate
- Pedestrian Signal Head

- Ground Rod at Handhole (H)
Double Handhole (H), or Controller (C).
- Ground Rod at Post (P)
or Mast Arm Pole (MA)
- Ground Rod at Electric
Service Installation

- Video Vehicle Sensor
- Battery Backup
- Pedestrian Push Button
- Existing Handhole
- Existing Lighting Controller

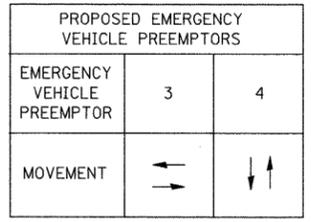


PROPOSED CABLE PLAN

NOTE:
EQUIPMENT GROUND CONDUCTOR (GREEN COLOR CODED) SPLICE TO FRAME AND COVER IS REQUIRED FOR ALL HANDHOLES OR DOUBLE HANDHOLES THAT CARRY SIGNAL CABLES AND SERVICE CABLES

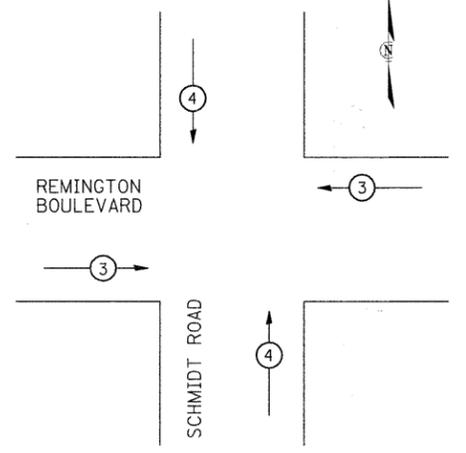
I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		% OPERATION	
		INCAND.	LED		
SIGNAL (RED)	17		17	0.50	144.5
(YELLOW)	17		25	0.25	106.2
(GREEN)	17		15	0.25	63.8
ARROW	18		12	0.10	21.6
PED. SIGNAL	8		25	1.00	200.0
CONTROLLER	1		100	1.00	100.0
ILLUM. SIGN.	4		136	0.55	299.2
FLASHER				0.50	
TOTAL =					935.3

ENERGY COSTS TO:
VILLAGE OF BOLLINGBROOK
375 N. BRIARCLIFF ROAD
BOLLINGBROOK, IL 60440-0591
ENERGY SUPPLY CONTACT: DENISE BAKER
PHONE: (815) 724-5054
COMPANY: COMED

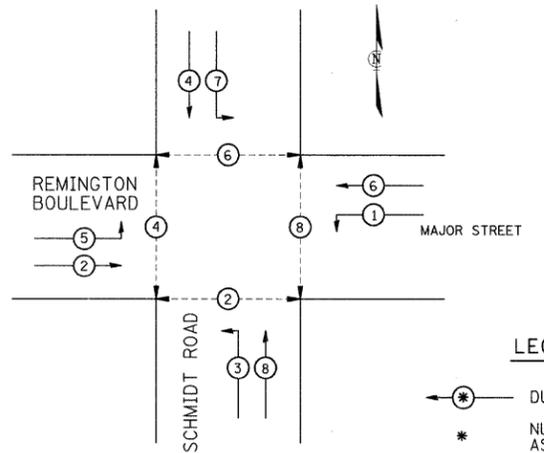


NOTE:
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH EXISTING ADJACENT SYSTEM.

FOUNDATION (DEPTH)	FT.	CABLE SLACK	FT.	VERTICAL	FT.
TYPE A - POST	4	HANDHOLE	6.5	ALL FOUNDATIONS	4
D - CONTROLLER	4	DOUBLE HANDHOLE	13	MAST ARM (L) POLE	20 + L
E - M. ARM POLE		SIGNAL POST	2	VIDEO, LUM. & PRIORITY	57
	24"	CONTROLLER CAB.	6	BRACKET MOUNTED	13
	30"	FIBER OPTIC	13	PED. PUSHBUTTON	4
	36"	ELECTRIC SERVICE	1	ELECTRIC SERVICE	13.5
		GROUND CABLE	1	SERVICE TO GROUND	13.5
				POST MOUNTED	6



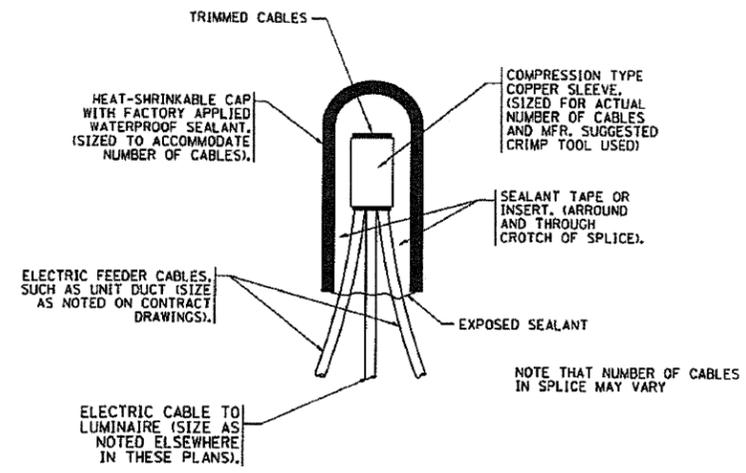
EMERGENCY VEHICLE PREEMPTIVE SEQUENCE



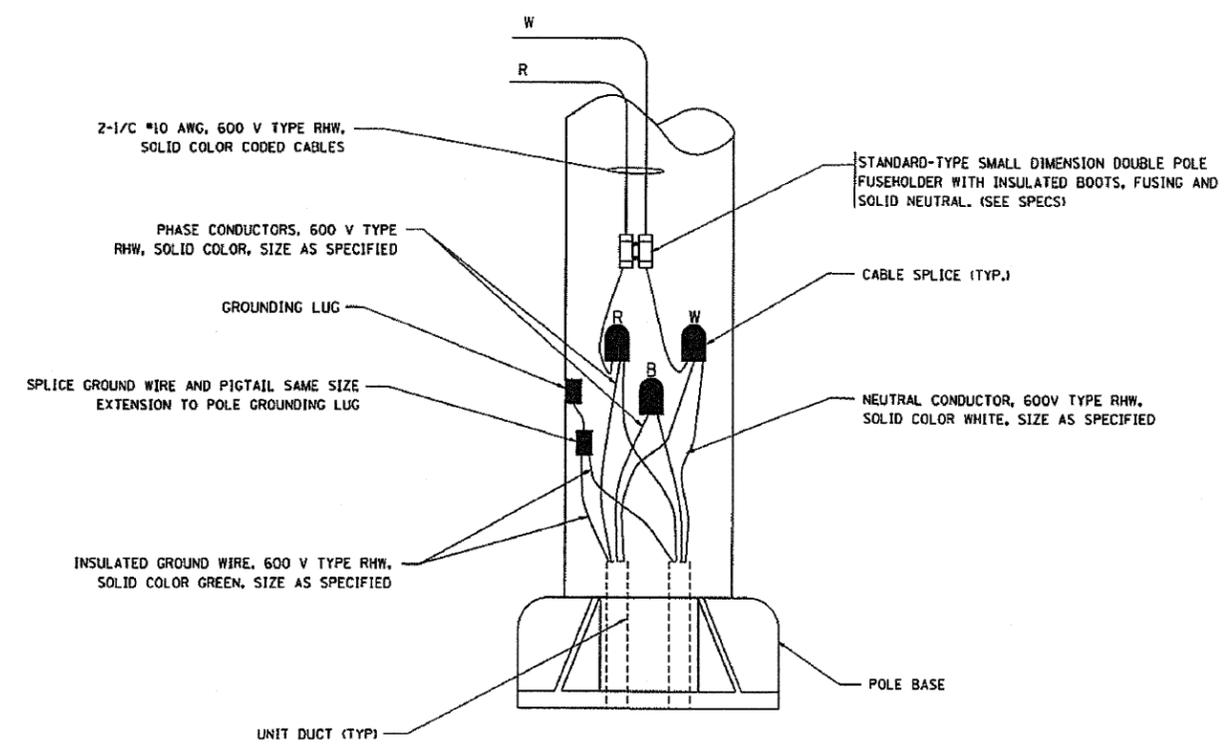
CONTROLLER SEQUENCE

- LEGEND**
- ⊙ → DUAL ENTRY PHASE
 - * NUMBER REFERS TO ASSOCIATED PHASE
 - ⊙ → PEDESTRIAN PHASE

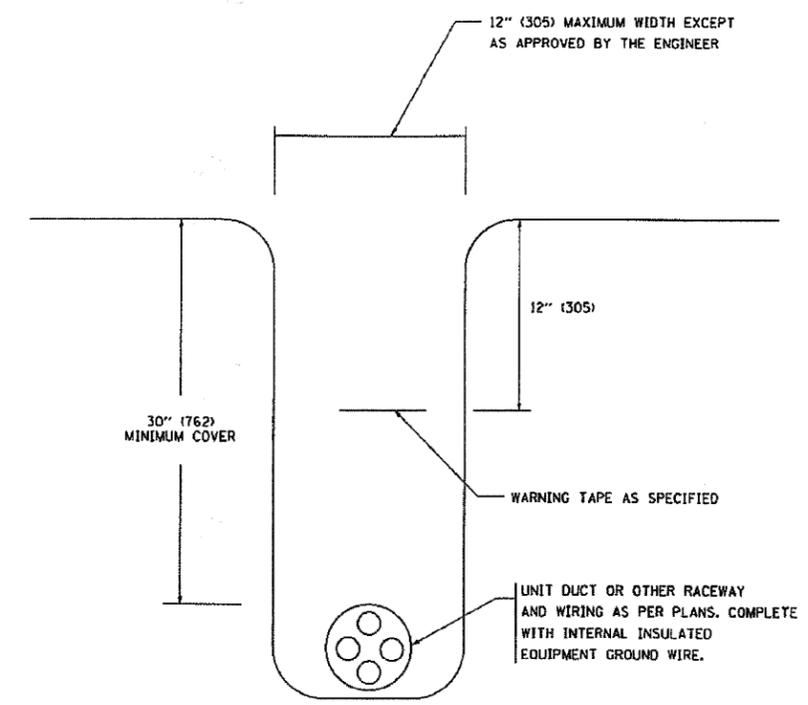
CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL SPLICE DETAIL
N.T.S.



POLE WIRING DETAIL
N.T.S.



TYPICAL WIRING IN TRENCH DETAIL
N.T.S.

PLOT DATE = 4/18/2007
 PLOT SCALE = 1/8"=1'-0"
 USER NAME = bbeardf

REVISIONS	
NAME	DATE
	06/08/03

ILLINOIS DEPARTMENT OF TRANSPORTATION

MISC. ELECTRICAL DETAILS
SHEET A

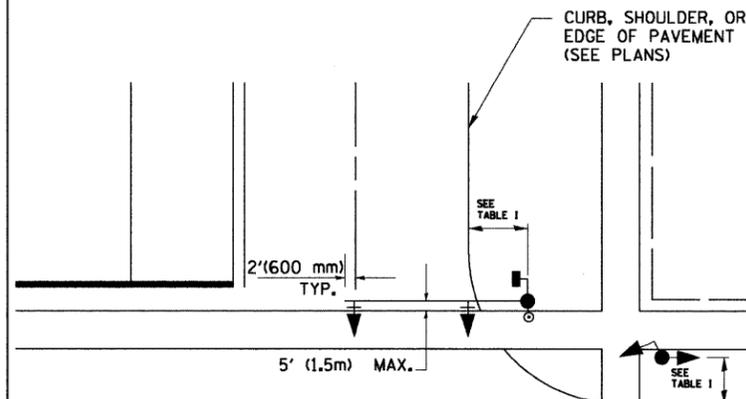
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HORIZ. 1"=20'

DRAWN BY
CHECKED BY
BE-702

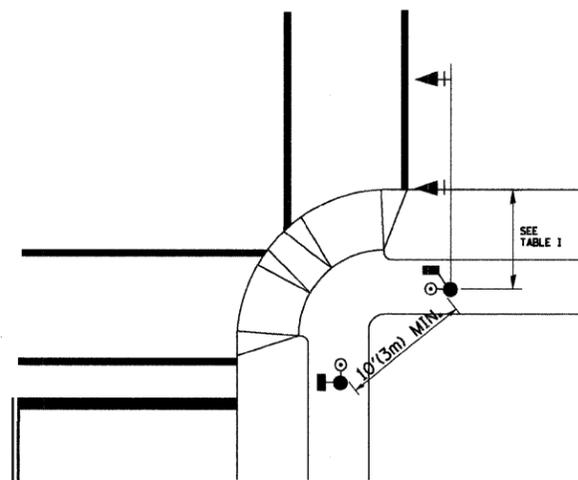
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			10	6
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

TRAFFIC SIGNAL MAST ARM AND POST

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



PEDESTRIAN SIGNAL PUSHBUTTON



RECOMMENDED PUSHBUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

NOTES:

- AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION, EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.
 AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.
 PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:
 A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.
 B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.
 C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
 D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).
 E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK.
- PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

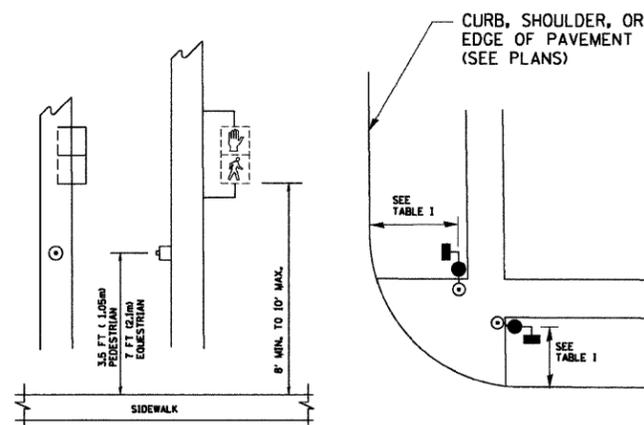


TABLE I

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN PUSHBUTTON	SEE NOTE 1	SEE NOTE 1

REVISIONS	
NAME	DATE
BUREAU OF TRAFFIC	1/01/02

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DISTRICT 1
 STANDARD TRAFFIC SIGNAL
 DESIGN DETAILS

SCALE: NONE

DRAWN BY: RWP
 DESIGNED BY: DAD
 CHECKED BY: DAZ
 SHEET 2 OF 4

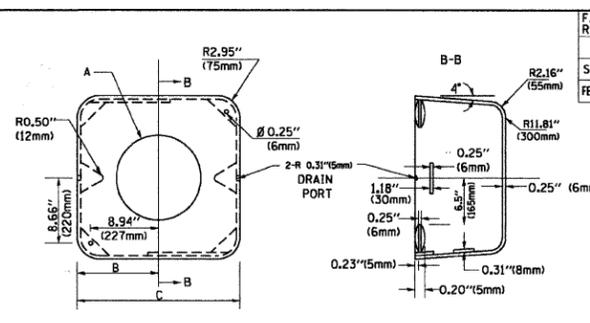
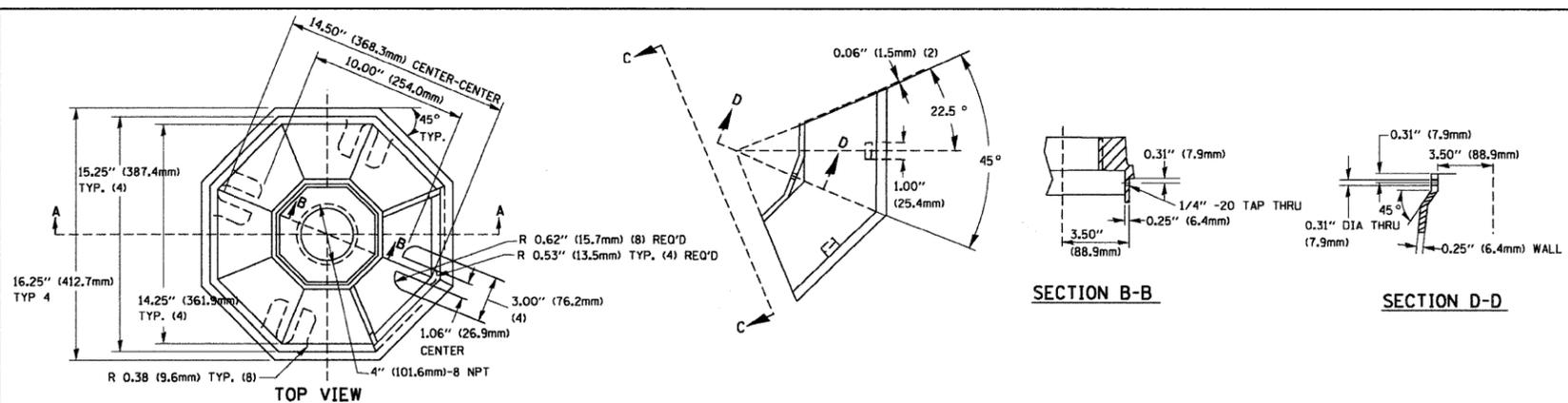
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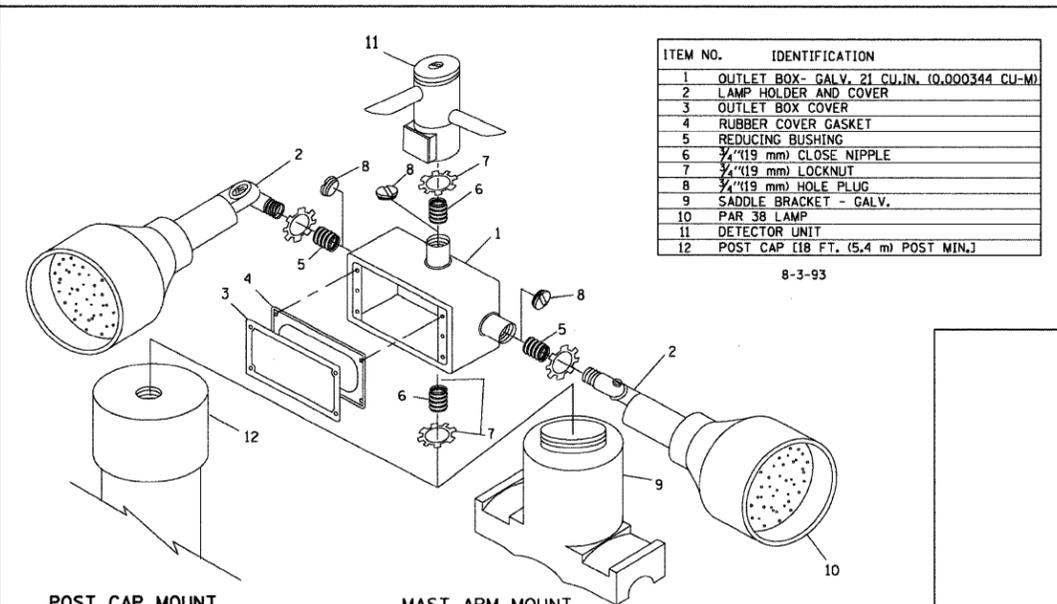
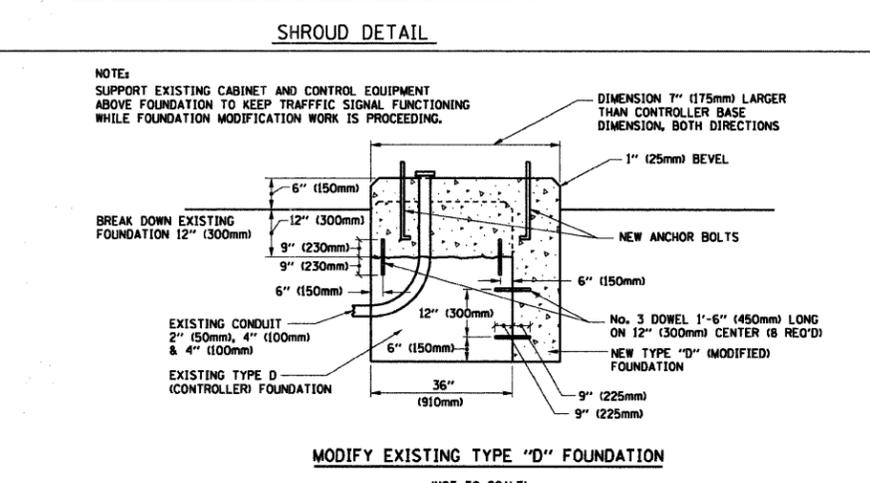
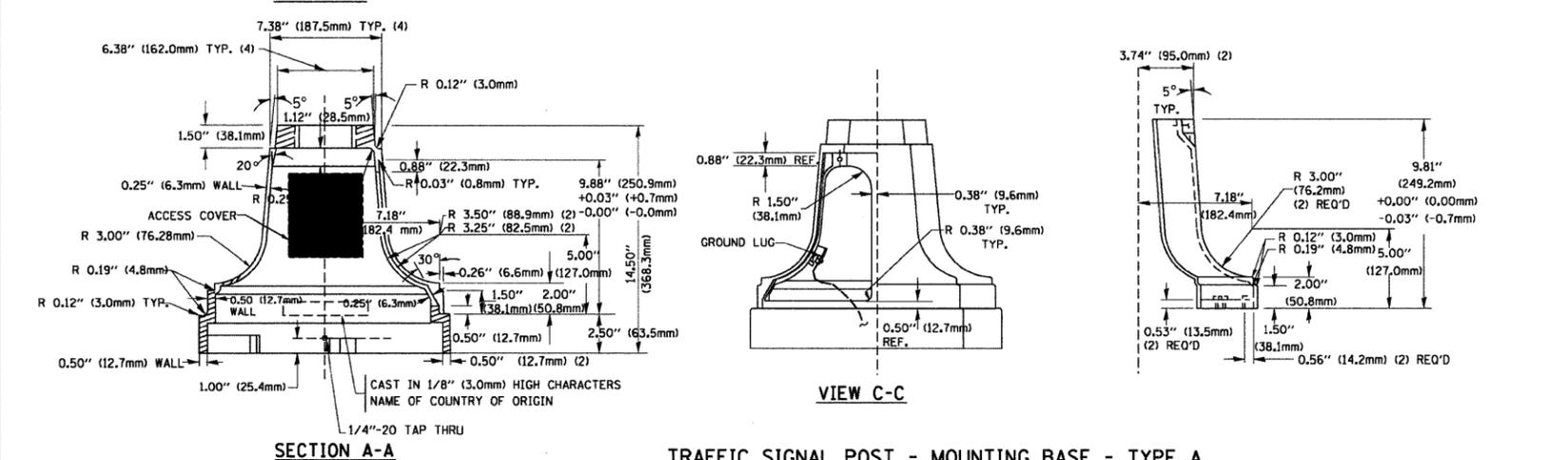
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			10	8

STA. TO STA.
FED. ROAD DIST. NO. (ILLINOIS FED. AID PROJECT)

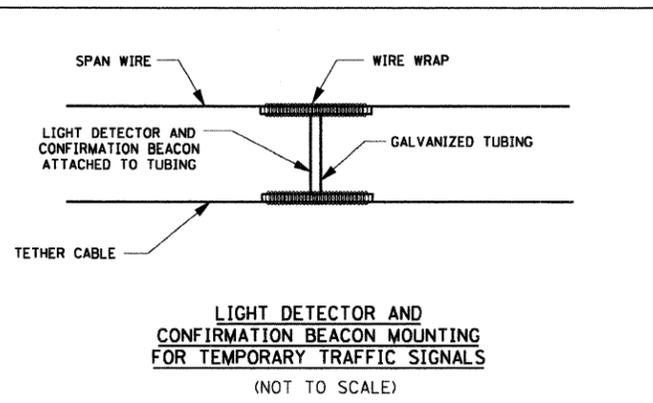
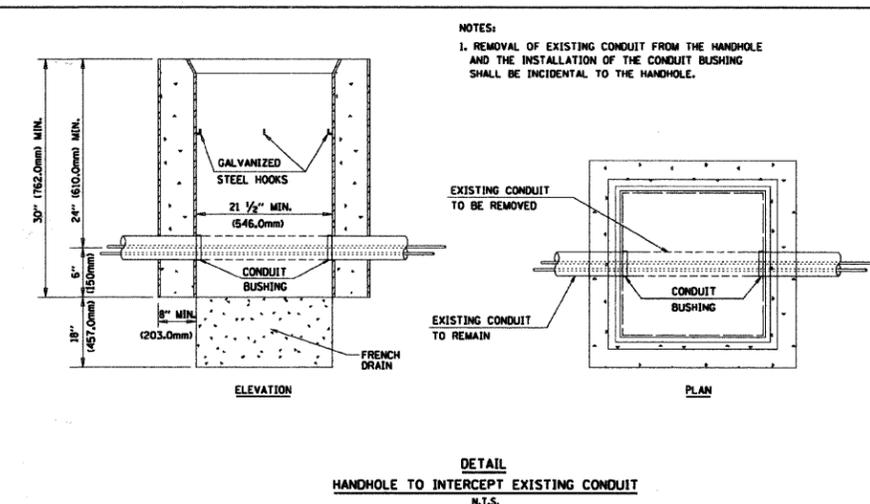
MATERIAL:
- ASTM A48 CLASS 30 GREY IRON
- ASTM A123 HOT DIPPED GALVANIZED



TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125\"(257mm)	9.5\"(241mm)	19\"(483mm)	12\"(300mm)	24kg
II	Ø 11.125\"(283mm)	10.75\"(273mm)	21.5\"(546mm)	12\"(300mm)	26kg



- NOTES:
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
 - ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
ITEM #9- 'BAND-IT' SADDLE BRACKET OR EQUIVALENT
 - 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.



REVISIONS	NAME	DATE
	BUREAU OF TRAFFIC	5/30/00
	BUREAU OF TRAFFIC	3/15/01
	BUREAU OF TRAFFIC	11/12/01
	BUREAU OF TRAFFIC	1-01-02

ILLINOIS DEPARTMENT OF TRANSPORTATION
**DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS**
SCALE: NONE
DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 4 OF 4
TS05

PLOT DATE = 3/7/2007
FILE NAME = K:\Users\lamb\design\...
USER NAME = lamb



Bolingbrook

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General Construction Standards 1

Sheet 1

General Construction Notes

Standard Procedures

All roadway construction shall conform to the "Standard Specifications for Road & Bridge Construction," adopted January 1, 2002 by the Illinois Department of Transportation and all amendments thereto and in accordance with the latest edition of the Development Code by the Village of Bolingbrook. In case of conflict, Village Code will take precedence.

All storm sewer, sanitary sewer, and water main construction shall conform to the "Standard Specifications for Water & Sewer Main Construction," published May 1986, and in accordance with the specifications for construction in the Village of Bolingbrook Development Code, unless otherwise noted.

The contractor shall be responsible for having the utility companies locate their facilities on site prior to any construction and will be held responsible for the maintenance and preservation of these facilities. The contractor, on site, shall determine the exact locations of the utilities. The contractor shall call J.U.I.L.E. @ 1-800-892-0123, for utility locations.

Access to work sites will be made available at all times to all vehicles. At no time shall access be denied.

All top of frames for storm and sanitary sewers, as well as, valve vault covers, are to be adjusted to meet final finished grade. This adjustment is to be made by the sewer contractor. These adjustments will not alleviate the contractor from any additional adjustments as required by the Village of Bolingbrook upon final inspection of the project.

Any existing signs, light poles, utility poles, curbs, pavements, and parkways which interfere with construction operations and are not scheduled for removal shall be removed and reset by the contractor at his own expense, as directed by the engineer. Any damage to these items shall be repaired or replaced by the contractor at his own expense, to the satisfaction of the owner. Any signs not required to be reset, shall be delivered to the respective owners. Removal of specified items, including but not limited to, pavement, sidewalk, curb & gutter, and additional construction debris not present at the beginning of construction, shall be disposed of off site by the contractor at his own expense.

No underground work shall be covered until the Village of Bolingbrook has inspected and approved the work done. Approval to proceed must be obtained from the Village of Bolingbrook prior to installing pavement base, binder, surface and prior to pouring any concrete after forms are set.

At the close of each construction day, and at the conclusion of construction operations, all drainage structures and flow lines shall be promptly restored to their respective original condition.

In the event that soft material with an unconfined compressive strength less than 0.5 TSF is encountered, the contractor shall over excavate to a depth of one foot below the bottom of the pipe and backfill with compacted, crushed stone properly formed to fit the material.

Trench backfill will be required to the full depth above all underground utilities within two feet of proposed or existing pavements, utilities, driveways and sidewalks. The trench backfill shall consist of CA-7 crushed, compacted stone aggregate.

The contractor is solely responsible for safety on the job and shall comply with O.S.H.A. safety regulations.

Street Lighting

Street lighting shall be in accordance with the requirements of the "American National Standards Practice for Roadway Lighting," approved July 8, 1977, and all revisions thereto.

The street light poles shall be spun aluminum, F.P.I. #7423-C18TE-CB with an 8' bracket mounted arm. The mounting height of the luminaire shall be 25' above the ground for residential lights and 30' above the ground for industrial lights.

Luminaires

Luminaires shall be high-pressure sodium, 100, 150 and 250 watt at locations specified. The luminaires shall be the following or approved equal:

- 100 Watt, 120V unit: G.E. #M2AR10S1NZAMS21 (Residential Streets)
- 150 Watt, 120V unit: G.E. #M2AR15S1NZAMS21 (Street Intersections)
- 250 Watt, 120V unit: G.E. #M2AR25S1NZAMS21 (Industrial Areas)

All luminaires shall be furnished with a photoelectric control receptacle (standard three-prong twist-lock type) installed.

All underground electrical conductors shall be Uniduct burial type with 600 Volt insulation and shall not be smaller than #8 AWG copper. Voltage drop shall not exceed 5%.

Red standard warning tape shall be installed one foot above the street light conductor wire for the full length of all trenches.

Street crossings, of electrical conduit, for the street light system, shall be subject to the following requirements:

1. All street crossings of conductor and/or cable will be installed in schedule 40, heavy wall rigid PVC conduit of size required by the Village of Bolingbrook to accommodate the conductor.
2. Duct shall extend a minimum of five (5) feet beyond the back of curb on each side of the street.
3. Duct shall be laid at an absolute minimum of fifty-two (52") inches below the bottom of the curb.
4. Duct shall be capped at both ends.

Earthwork Improvements

Topsoil Excavation

1. Excavate topsoil and other structurally unsuitable materials within those areas that will require earth excavation or compacted earth fill material, in order to achieve the plan subgrade elevations.
2. Place the excavated material in a designated area for future use within areas to be landscaped, and those areas not requiring structural fill material.
3. Compaction of the excavated material shall be moderate.
4. Excess material, if not used for other on-site purposes, shall be completely removed from the construction site and disposed of off-site by the contractor.

Earth Excavation

1. The fill material shall be placed in loose lifts that shall not exceed eight (8") inches in thickness, and the water content shall be adjusted in order to achieve required compaction. Earth material may be placed within that portion of the site not requiring structural fill to within six (6") inches of the plan finished grade elevation. In areas requiring structural fill, however, the earth material shall not be placed over topsoil or other unsuitable materials unless specifically directed by a soils engineer with the concurrence of the Village of Bolingbrook.

2. Compaction of the earth and other suitable materials shall be to at least 95% of the modified proctor dry density with proposed pavements and building pad areas, sidewalks, etc. Moderate compaction is required elsewhere.

3. Excess materials, if not utilized as fill, shall be completely removed from the construction site and disposed of off site by the contractor.

4. Topsoil shall be stripped before placement of fill.

Preservation

Prior to removal of any trees or construction activities, a tree removal permit must be obtained. Prior to any grading or construction activity on the site, all tree fencing shall be in place. It shall extend 10' beyond the tree dripline and shall be high enough so as to be visible to all construction personnel.

Trees not marked for removal shall be considered as designated to be saved and shall be protected under the provisions of the Village of Bolingbrook Code.

Grade changes, utility trenches, storage or construction material, dumping of waste or storage of construction equipment shall not be allowed within the snow fence. Any utilities proposed within the snow fence will be augered.

It is recommended that trees be maintained in their native condition. No lawn should be placed around trees and that the area be mulched with two (2") inches of decomposed leaves and two (2") inches of wood chips or bark.

All trees to be saved which have been subjected to construction activity within the dripline, should be selectively thinned 10% by an arborist. No tree shall be topped, headed-back, skinned, or climbed with spikes; however, all dead wood shall be removed. All cuts over one (1") inch in diameter shall be made flush with the next large branch. Wounds over one (1") inch in diameter shall be painted with an approved tree paint. All pruning shall be done in a timely fashion so as not to interfere with construction. All limbs, branches, and other debris resulting from this work shall be disposed of off site by the contractor at his own expense.

Encroachment into the root zone, whether by equipment or construction materials, detrimental to the health of the tree, shall result in a fine of \$300.00 (min) to \$1000.00 (maximum) per occurrence per day.

Parkway Tree Planting

Planting season shall be approximately, March 15 - May 1 & October 15 - December 1. For a list of allowed species see chapter 30 section 415 of the "Village of Bolingbrook Development Code."

Trees shall be planted on a maximum of 40' and a minimum of 25' spacing such that the total number of trees shall equal or exceed the ratio of one tree for each 40' of street frontage.

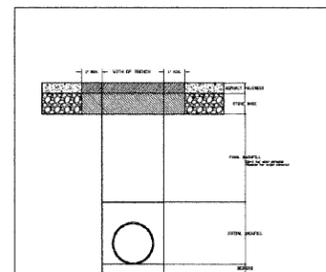
All trees shall be grown in a nursery located in the northern half of the state of Illinois and licensed by the state of Illinois. All trees will have a minimum of three inches of mulch. Excess soil, clay, or construction materials will not be used as backfill material.

Traffic Control Measures

After the roads are constructed and opened to traffic, the developer shall install any necessary traffic control measures including but not limited to yield signs, stop sign, speed limit sign, and thermoplastic striping. The required traffic control measures and their locations shall be as directed by the Village Engineer.

Com Ed / Ameritech / Comcast

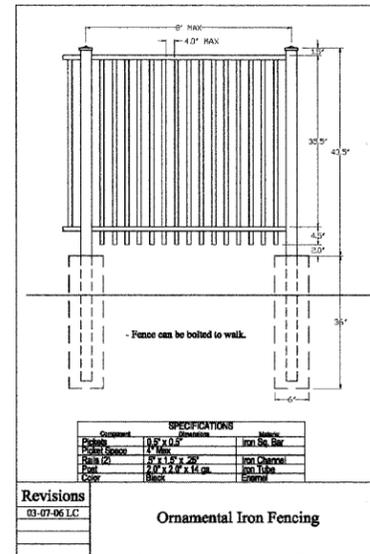
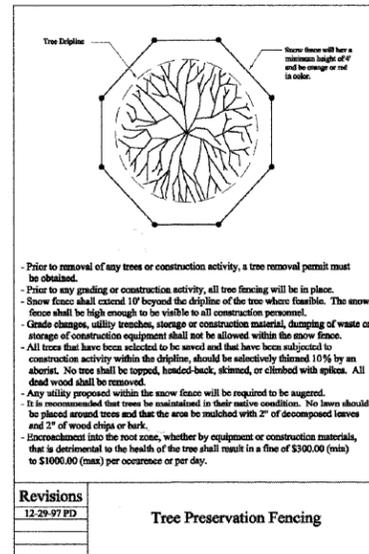
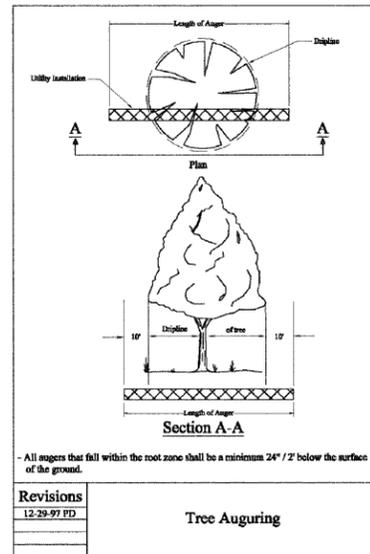
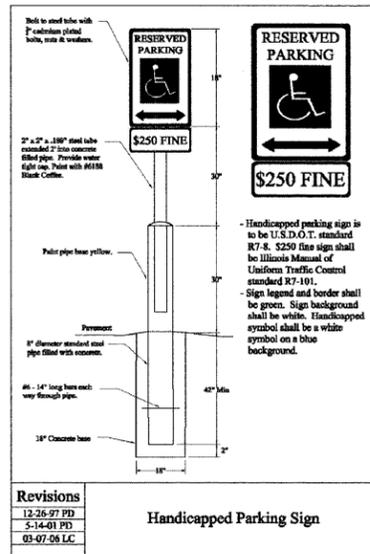
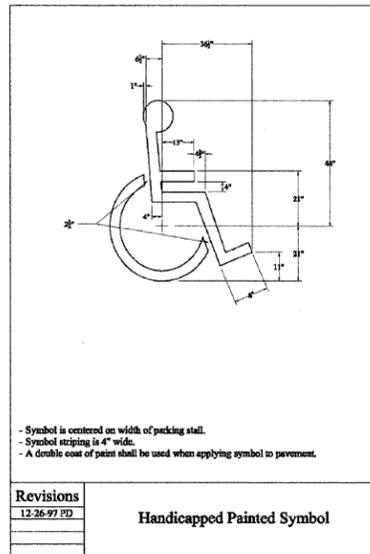
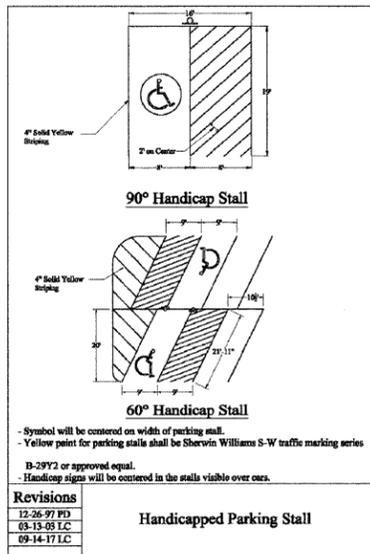
Utility service lines for residential building shall be located generally along the lines, and not run across the middle of the rear yard.



- After completion of final back fill and stone base, saw cut existing pavement min. 1' beyond the perimeter of trench.
- If saw cut is within 2' of existing pavement edge or patch remove existing pavement to the edge.
- Remove old base and replace with bituminous concrete binder.
- Restore asphalt top course to match existing.

Revisions

Permanent Bituminous Pavement Patch





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Pavement Standards

Sheet 3

Street Standards

General Specifications

It is intended that all streets shall be constructed in accordance with the most recently adopted edition of the I.D.O.T. "Standard Specifications for Road & Bridge Construction." In particular, temperature restrictions and the use of superpave standards, for paving shall conform to this article.

It shall be the contractor's responsibility to provide proper barricading, warning devices and safe management of traffic within the area of construction. All such devices and their installation shall conform to the "Illinois Manual of Uniform Traffic Control Devices for Streets and Highways," latest edition and in accordance with the "Village of Bolingbrook Development Code."

All streets are to be kept clean and free of construction debris and mud at all times and, if necessary, will be swept away. The full width of public right-of-way shall be graded, including the subgrade of the areas to be paved. All stumps, trees that can not be saved, bollards and similar items shall be removed.

Subgrade & Base Materials

Prior to the construction of the curb & gutter and placement of the base material, the streets shall be fine graded to within one tenth foot (1/10) of the final subgrade elevation, to a point two feet (2') beyond the back of the curb.

Streets shall be constructed on a subgrade material having an Illinois Bearing Ratio (IBR) of not less than 4. If a lesser subgrade material exists, it shall be removed and replaced with suitable material or treated in a manner as specified by a competent soils engineer who will be retained by the Village of Bolingbrook, but whose fee will be paid by the applicant.

Final Pavement & Final Grades

The pavement materials shall be as detailed on the engineering plans. Thickness specified shall be considered to be considered to be the minimum compacted thickness.

Striping will be thermoplastic or a high quality yellow or white paint. The Village Engineer will make the decision on what will be used.

Combination Curb & Gutter (30-408 (6))

General Specifications

Curb & gutters shall be constructed along the outside pavement lines of all streets. A three (3") inch stone bedding (CA-6) is required under all curbs.

Concrete curb & gutter shall be reinforced with two (2) #5 rebars.

The minimum thickness of the gutter flag for all curb & gutter types shall be 8".

Expansion Joints

Expansion joints for combination curbs & gutters shall be three fourths (3/4) inches thick impregnated asphalt and shall extend the entire depth of the curb & gutter. The expansion joints shall be placed at fifty (50) foot intervals for hand pours and at one hundred (100) foot intervals for slip or monolithic pours. There shall also be expansion joints at the P.C. & P.T. of any curb curvature and five (5) feet from each side of all in-curb inlets or catch basins. Each expansion joint shall have two (2) one (1") inch dowel bars approximately eighteen (18") inches long and properly grouted.

Construction Joints

Construction joints for combination curb & gutters shall be formed by steel templates or by sawcutting. The construction joints shall be formed, cut, at twelve and one half (12 1/2) foot intervals, to a thickness one eighth (1/8) inch, to a length equal to the width of the curb & gutter and to a depth of two (2") inches below the surface. If the joints are formed with steel templates, the templates shall be left in place until the concrete has sufficiently set in place to hold its shape, but shall be removed while the forms are still in place. If the joints are sawcut, the joints shall be cut within twenty-four (24) hours of the pour. All construction joints shall be filled with I.D.O.T. approved sealant.

Curing Compound

When the ambient temperature is forty (40) degrees and on the rise, all concrete curb & gutter shall be protected with curing compound on all exposed surfaces. If forms are used in construction, curing compound shall be applied on the sides of the curb & gutter immediately following removal of the forms. The compound shall be an ASTM 309-89, Type 1, translucent membrane-forming, curing compound with a fugitive dye. When the ambient temperature is forty (40) degrees and on the decrease, the concrete curb & gutter shall be protected with an insulating cover that adequately prevents hydration heat loss and water loss, in lieu of curing compound.

Sidewalks (30-414)

Material & Construction

Sidewalks shall be constructed of Portland Cement (class SI) to a thickness of five (5") inches. Concrete for such sidewalks shall have a minimum twenty-eight (28) day compressive strength of four thousand (4000) pounds, and shall contain not less than three (3%) percent or more than six (6%) percent entrained air. Slump shall not be less than two (2") inches and not more than four (4") inches. Three (3), five-eighths (5/8) reinforcing rods, ten (10) feet in length shall be placed in all crossovers. All concrete walks shall have a bell ring finish prior to applying a broom finish and shall be true to grades as approved by the Village Engineer. Mesh with six (6") inch spacing will be required at all driveway locations. The sub-base should consist of I.D.O.T. specified CA-7 material, which has been mechanically compacted.

Curing Compound

When the ambient temperature is forty (40) degrees and on the rise, all concrete curb & gutter shall be protected with curing compound on all exposed surfaces. If forms are used in construction, curing compound shall be applied on the sides of the curb & gutter immediately following removal of the forms. The compound shall be an ASTM 309-89, Type 1, translucent membrane-forming, curing compound with a fugitive dye. When the ambient temperature is forty (40) degrees and on the decrease, the concrete curb & gutter shall be protected with an insulating cover that adequately prevents hydration heat loss and water loss, in lieu of curing compound.

Expansion & Construction Joints

Expansion joints three fourths (3/4) inch thick and full depth of the walk shall be placed at one hundred (100) foot intervals. Material shall be asphalt impregnated joint material manufactured for that use. Construction joints shall be placed at intervals equal to the width of the concrete walk.

All sidewalks will be backfilled within a two (2) day time period following pouring.

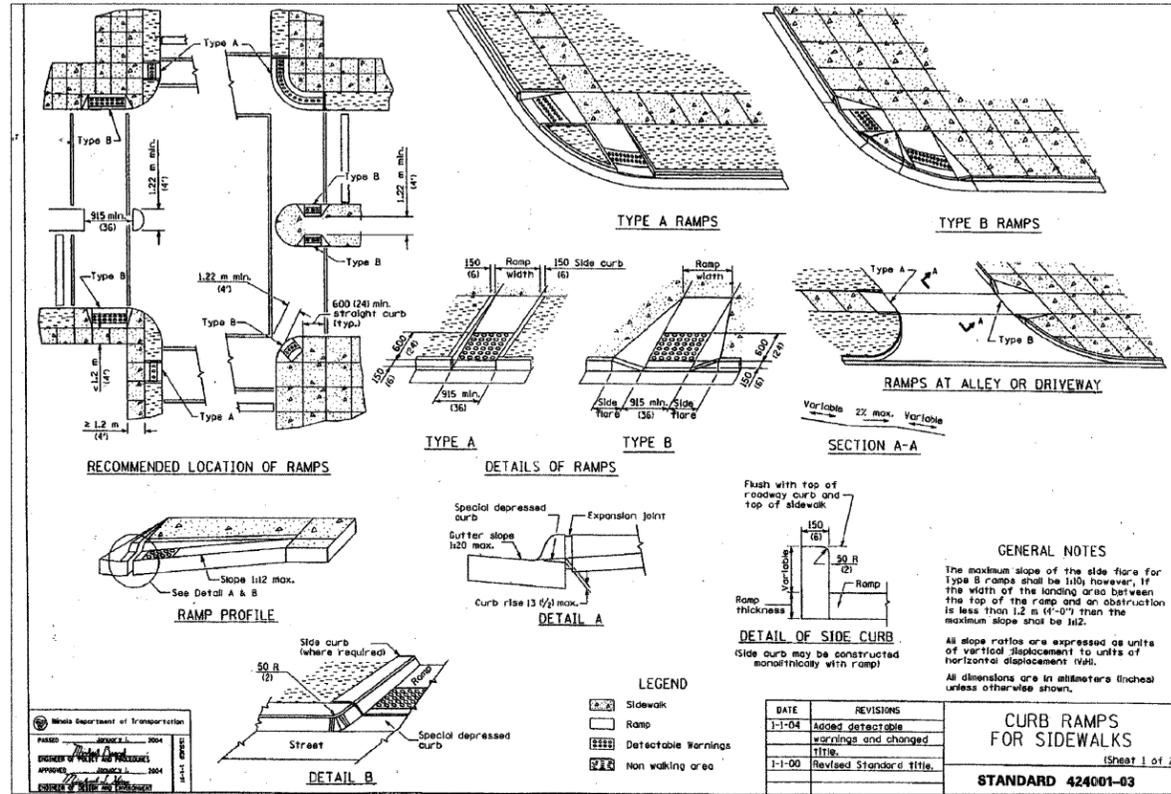
Curb Ramps for Sidewalks (ISP 04-30)

This work shall consist of construction sidewalk curb ramps with detectable warnings in compliance with the Americans with Disabilities Act, Accessibility Guidelines (ADAAG). Work shall be according to Section 424 of the Standard Specifications except as modified herein.

The detectable warnings shall consist of an area of truncated dome that provide both visual and tactile cues to pedestrians who are about to enter into the warning area shall begin 6 in. from the back of the curb and continue 2 ft. in the direction of pedestrian travel for the entire width of the walking surface.

The detectable warnings shall also present a contrast in color from the adjacent sidewalk. This shall be accomplished by constructing the warning area, plus the 6 in. area between the warning area and the back of the curb, out of concrete that is integrally colored red. However if the sidewalk is brick or of the same dark color, the contrast requirement shall be achieved with normal (Grey), Class SI concrete.

The concrete shall be placed and finished according to Article 424.06 except the area to be stamped shall not be broomed. When the bleed water has been absorbed, stamping shall begin. The entire width of the curb ramp shall be stamped at the same time. A single stamp or a combination of stamps may be used. The base elevation of the domes shall be even with the adjacent sidewalk surface; the stamp shall not be forced down into the concrete. Upon completion of curing, or after cold weather protection if required, the protruding mortar top on the top of each dome shall be removed and the dome rubbed or ground smooth.



GENERAL NOTES
The maximum slope of the side flare for Type B ramps shall be 1:10 however, if the width of the landing area between the top of the ramp and an obstruction is less than 1.2 m (4'-0") then the maximum slope shall be 1:12.
All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (H:V).
All dimensions are in millimeters (finch) unless otherwise shown.

Table with columns: DATE, REVISIONS, CURB RAMPS FOR SIDEWALKS, STANDARD 424001-03

