

ORDER OF SHEETS

SECTION NO. 1	TITLE
SECTION NO. 2	TYPICAL SECTIONS AND DETAILS
SECTION NO. 3	ESTIMATE OF QUANTITIES
SECTION NO. 3	MISCELLANEOUS QUANTITIES
SECTION NO. 4	RIGHT OF WAY PLAN
SECTION NO. 5	PLAN AND PROFILE
SECTION NO. 6	STANDARD DETAIL DRAWINGS
SECTION NO. 7	SIGN PLATES
SECTION NO. 8	STRUCTURE PLANS
SECTION NO. 9	COMPUTER EARTHWORK DATA
SECTION NO. 9	CROSS SECTIONS

TOTAL: 164



N

DESIGN DESIGNATION

A.D.T. (CURRENT) =	5,400
A.D.T. (2034) =	5,900
D.H.V. =	650
D. =	55%
T. =	2.3%
DESIGN SPEED =	30 M.P.H.
ESALS =	210,000

CONVENTIONAL SYMBOLS

PLAN

COUNTY LINE	---
TOWNSHIP OR RANGE LINE	---
SECTION LINE	---
CORPORATE OR CITY LIMITS	---
PROPERTY LINE	---
STANDARD BENCH MARK	⊙
EXISTING RIGHT OF WAY LINE	— R/W
PROPOSED SEWER LATERAL	(SIZE)
REFERENCE LINE	—
CONCRETE WALK/DWY. REMOVAL	▨
LIMITS OF CONCRETE PAVEMENT REMOVAL	X X X X X
COMBUSTIBLE FLUIDS	CAUTION
RAILROADS	+++++
FENCE	x (TYPE) x
CATCH BASIN OR INLET	⊠
EXISTING	⊠
PROPOSED	⊠
PROFILE	
GRADE LINE	—
ORIGINAL GROUND	—
GRADE ELEVATION	95.36

UTILITIES

CITY UNDERGROUND CONDUIT	---
ELECTRIC	---
GAS	---
COMBINED SEWER	---
TELEPHONE	---
WATER	---
TRAFFIC & ELECTRICAL SERVICES	---
FIRE & POLICE CALL BOX	⊙
LIGHT POLE	⊙
POWER POLE	⊙
TELEPHONE OR TELEGRAPH POLE	⊙
TRAFFIC SIGNAL	⊙
TRAFFIC SIGNAL CONTROL BOX	⊙
HYDRANT	⊙
GAS OR WATER GATE VALVE	⊙
MANHOLES - SEWER	⊙
UTILITY (TYPE)	⊙
TREES - EXISTING	⊙
TO BE REMOVED	⊙

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

SOUTH 13TH STREET

WEST WINDLAKE AVENUE TO WEST FOREST HOME AVENUE

LOCAL STREET
MILWAUKEE COUNTY

STATE PROJECT NUMBER

2505-00-75

R-22-E

T-7-N

T-6-N

END PROJECT

STA. 34+80.00, T/L

BEGIN PROJECT

STA. 05+83.00, T/L

Y. = 373,030.96

X. = 2,554,114.71

LAYOUT

SCALE 1/2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.549 MI. (URBAN)

PLOT DATE:

STATE PROJECT

FEDERAL PROJECT

PROJECT

CONTRACT

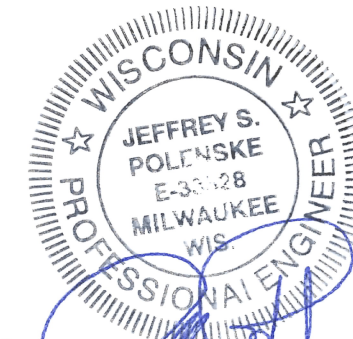
2505-00-75

WISC 2016091

I

Accepted For
City of Milwaukee11/20/15 *Ghassan Kulkarni*
(Date) Commissioner of Public Works

Original Plans Prepared By

11/20/15 *Jeffrey S. Polenske*
(Date) City EngineerSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor _____ City of Milwaukee
Designer _____ City of Milwaukee
Management Consultant _____ DAAR Engineering, Inc.
C.O. Examiner _____

APPROVED FOR THE DEPARTMENT

DATE: 11/24/15 *Jeffrey S. Polenske*
(Signature)

E

FILE NAME=

GENERAL NOTES

1. ALL DISTURBED AREAS, NOT SURFACED, ARE TO BE COVERED WITH 4" OF TOPSOIL, SODDED AND FERTILIZED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. ALL TREES AND SHRUBS SHALL BE REMOVED UNLESS DESIGNATED BY THE ENGINEER.
3. TRANSVERSE JOINTS IN THE SIDEWALK SHALL BE CONSTRUCTED AT INTERVALS EQUAL TO THE WIDTH OF THE CONCRETE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
4. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
5. CONSTRUCTION PERMITS FOR SIDEWALK &/ OR CONCRETE DRIVEWAY WORK HAVE BEEN OBTAINED, WHICH RIGHTS SHALL BE EXTENDED TO THE CONTRACTORS.
6. INLET SCREENS ARE TO BE PLACED BETWEEN THE FRAME AND GRATE OF CATCH BASINS / INLETS TO PREVENT SOIL FROM ENTERING THE SEWERS. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURES ARE NO LONGER NECESSARY.
7. ALL CURB RADII ARE MEASURED TO THE FACE OF THE CURB FOR THE CURB SECTIONS AT CORNERS.

STANDARD ABBREVIATIONS

- ASPH. - ASPHALT
- B.M. - BENCH MARK
- CTR. - CENTER
- C/L - CENTER LINE
- COMB. - COMBINED
- CONC. - CONCRETE
- C.W. - CONCRETE WALK
- COR. - CORNER
- C - CURB
- ELEV. - ELEVATION
- ENT. - ENTRANCE
- EXIST. - EXISTING
- F - FLANGE
- G - GUTTER, OR GAS
- HYD. - HYDRANT
- LT. - LEFT
- MMSD - MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
- P/L. - PROPERTY LINE
- R OR RAD. - RADIUS
- RET. - RETAINING
- RT. - RIGHT
- R/W - RIGHT OF WAY
- TEL - AMERITECH
- TES - TRAFFIC ENGINEERING, AND ELECTRICAL SERVICES
- T/L - TRANSIT LINE
- WEP - WISCONSIN ELECTRIC POWER

ORDER OF SECTION 2 SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTION
ALIGNMENT PLAN
LANDMARK REFERENCE MONUMENT
CONSTRUCTION DETAILS
DRAINAGE DETAILS
UTILITIES & DRAINAGE

UTILITY CONTACTS

CITY OF MILWAUKEE, UTILITY COORDINATOR

ANTHONY J. KOTECKI
841 N. BROADWAY, RM 710
MILWAUKEE, WI 53202
PHONE: 414-286-2433
anthony.kotecki@milwaukee.gov

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333 W. EVERETT ST. - A299
MILWAUKEE, WI 53203
PHONE: 414-221-5617
latroy.brumfield@we-energies.com

WE ENERGIES - ELECTRIC

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333 W. EVERETT ST. - A299
MILWAUKEE, WI 53203
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latroy.brumfield@we-energies.com

TIME WARNER CABLE

STEVE CRAMER
1320 N. DR. MARTIN LUTHER KING JR. DR.
MILWAUKEE, WI 53212
PHONE: 414-277-4045
steve.cramer@twcable.com

AT & T WISCONSIN

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PHONE: 262-896-7434
me1754@att.com

OTHER CONTACTS

WISCONSIN DEPT. OF NATURAL RESOURCES

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2300 N. DR. MARTIN LUTHER KING JR. DR.
MILWAUKEE, WI 53212-0436
PHONE: 414-263-8517
kristina.betzold@wisconsin.gov

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1942 N. 17TH ST.
MILWAUKEE, WI 53205
PHONE: 414-343-1764

MILWAUKEE PUBLIC SCHOOLS

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CHIEF OPERATIONS OFFICER
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P.O. BOX 2181
MILWAUKEE, WI 53201-2181
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natemj@milwaukee.k12.wi.us

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SAMUEL MEDHIN
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MILWAUKEE, WI 53202
PHONE: 414-286-0474
medhin.samuel@milwaukee.gov

SEWRPC - LAND MONUMENTS

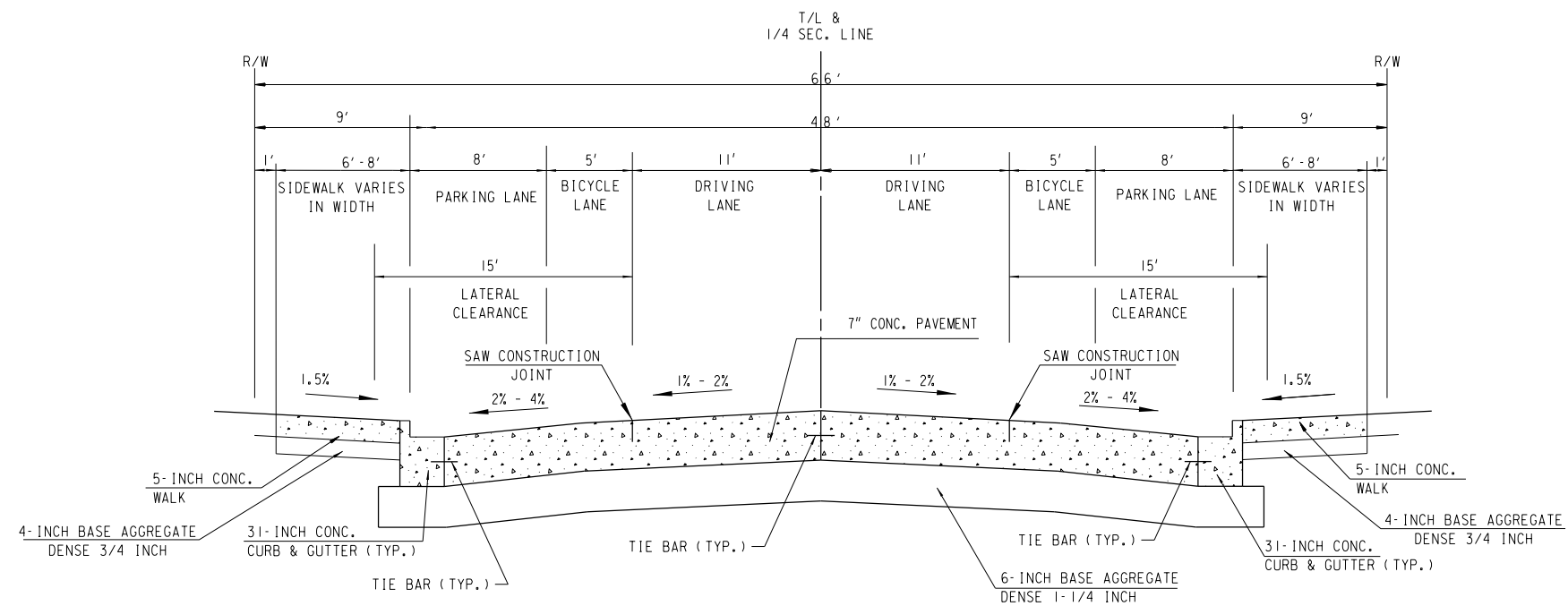
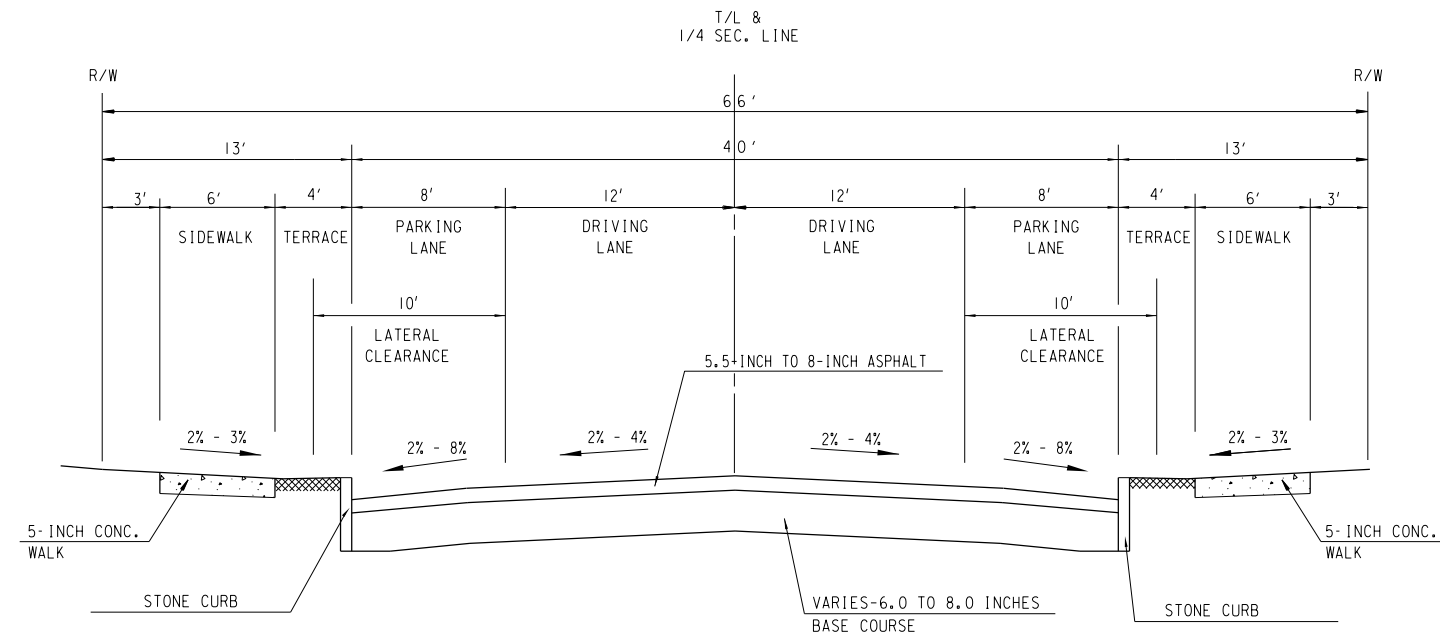
JOHN WASHBURN
W239 N1812 ROCKWOOD DR.
WAUKESHA, WI 53187
PHONE: 262-547-6722 EXT. 295

DON SIMON
W239 N1812 ROCKWOOD DR.
WAUKESHA, WI 53187
PHONE: 262-547-6722 EXT. 249

DIGGERSHOTLINE

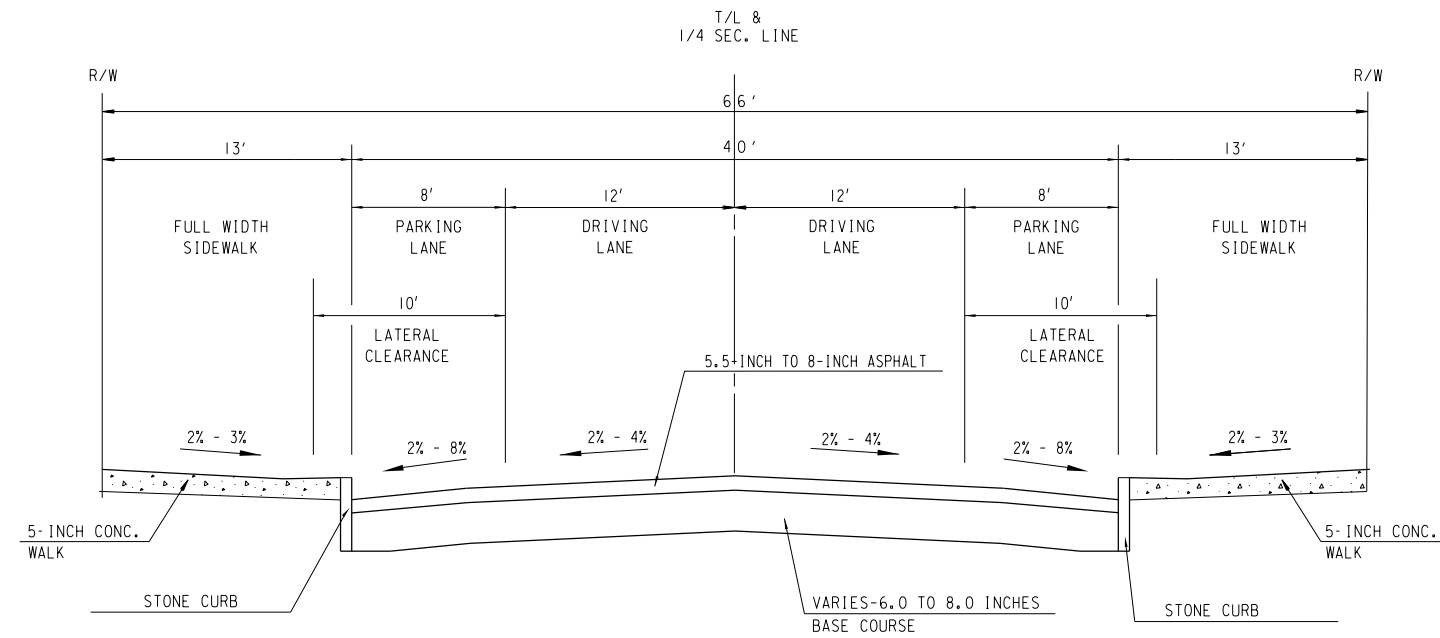
Dial 811 or (800) 242-8511

www.DiggersHotline.com

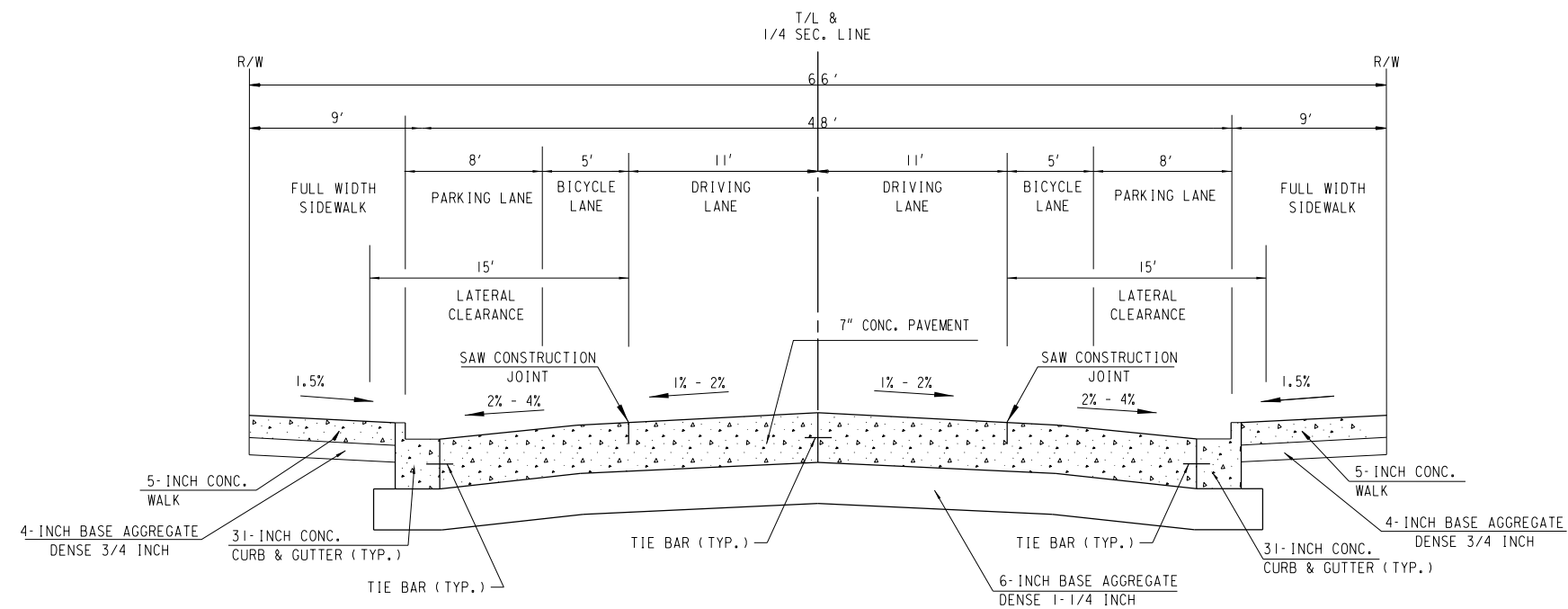


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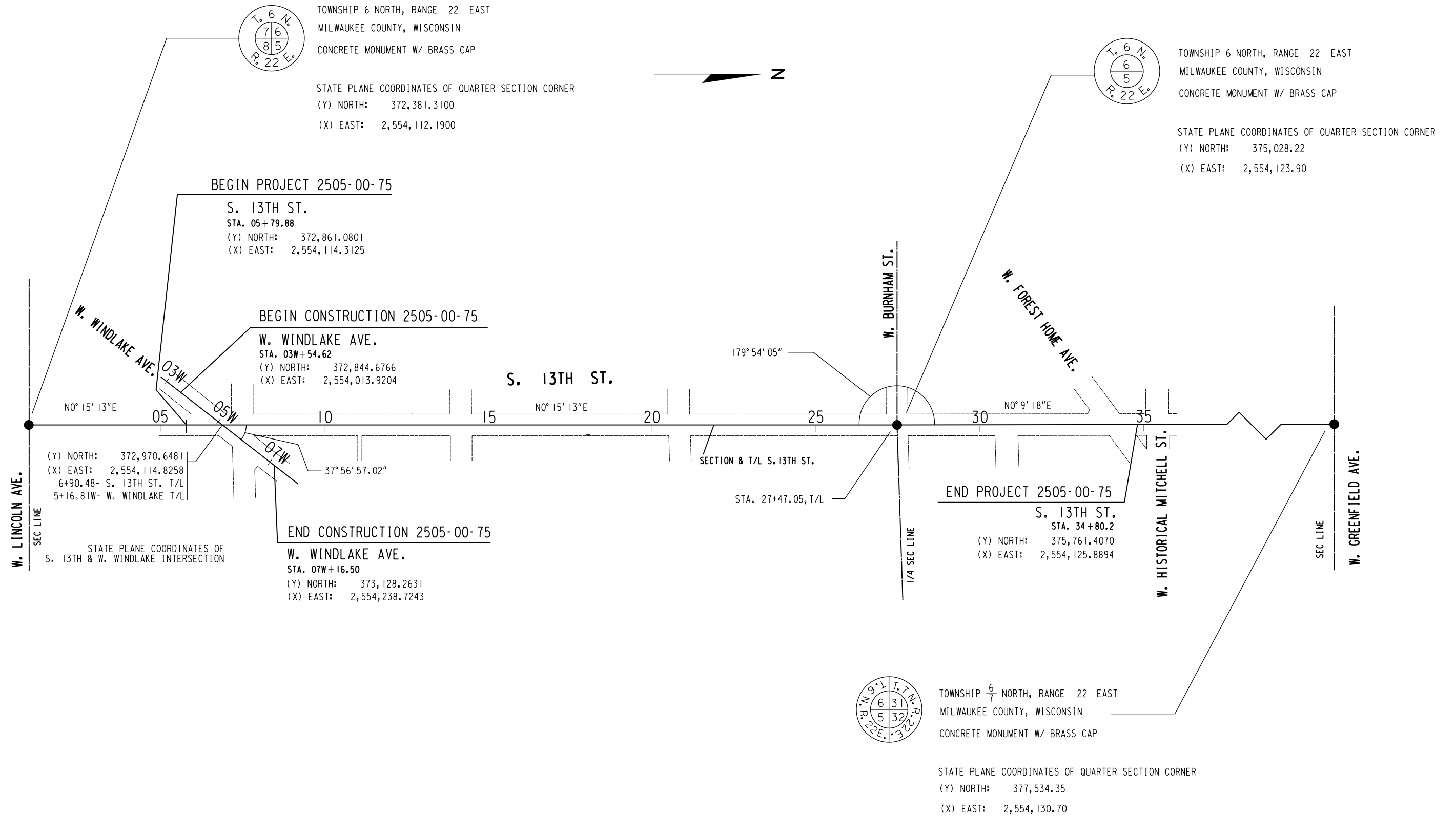
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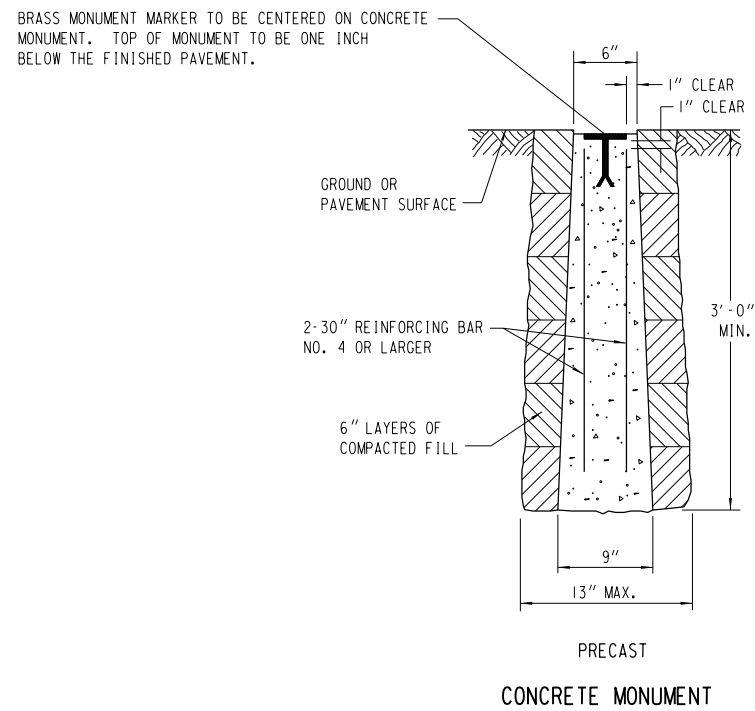


TYPICAL EXISTING SECTION
SOUTH 13TH STREET
STA. 27+75 TO STA. 34+80



TYPICAL FINISHED SECTION
SOUTH 13TH STREET
STA. 27+75 TO STA. 34+80





MONUMENT MARKER LOGO
(TO BE FURNISHED BY OTHERS)

GENERAL NOTES

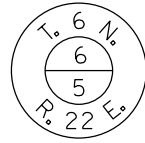
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CITY OF MILWAUKEE STREET CONSTRUCTION SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE CITY OF MILWAUKEE, INFRASTRUCTURE SERVICES DIVISION, CONSTRUCTION SECTION.

INSTALLATION OF PRECAST MONUMENT TO BE SUPERVISED BY CITY OF MILWAUKEE, INFRASTRUCTURE SERVICES DIVISION, CONSTRUCTION SECTION FOR ACCURACY OF LOCATION.

LOCATION	MONUMENT	STATION	REMARKS
S. 13TH ST.			
AT W. BURNHAM ST.	I	27+47.05 ON T/L	SEE SPECIAL PROVISIONS FOR INFORMATION ON RESTORATION OF MONUMENTS

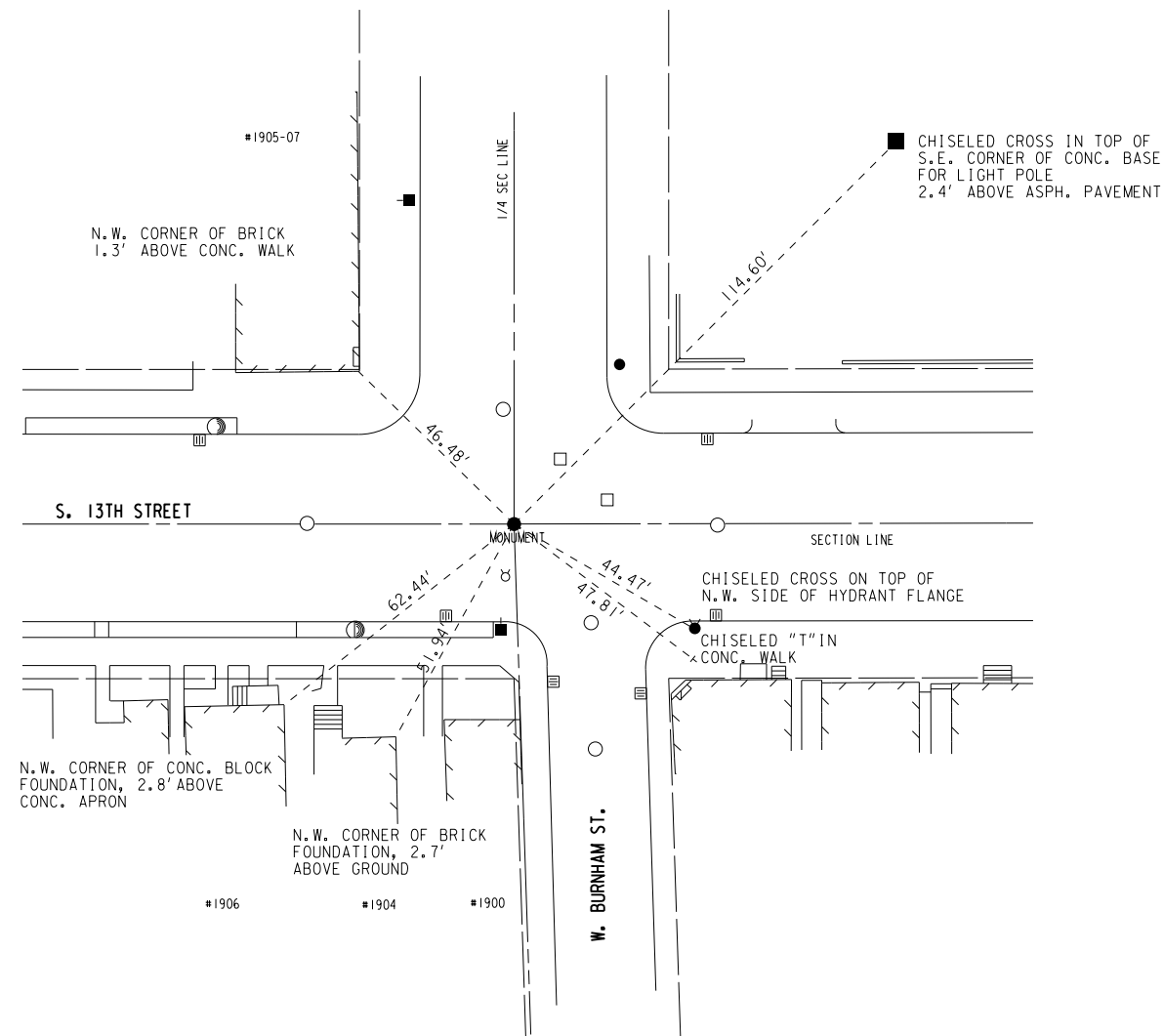
LANDMARK REFERENCE MONUMENT



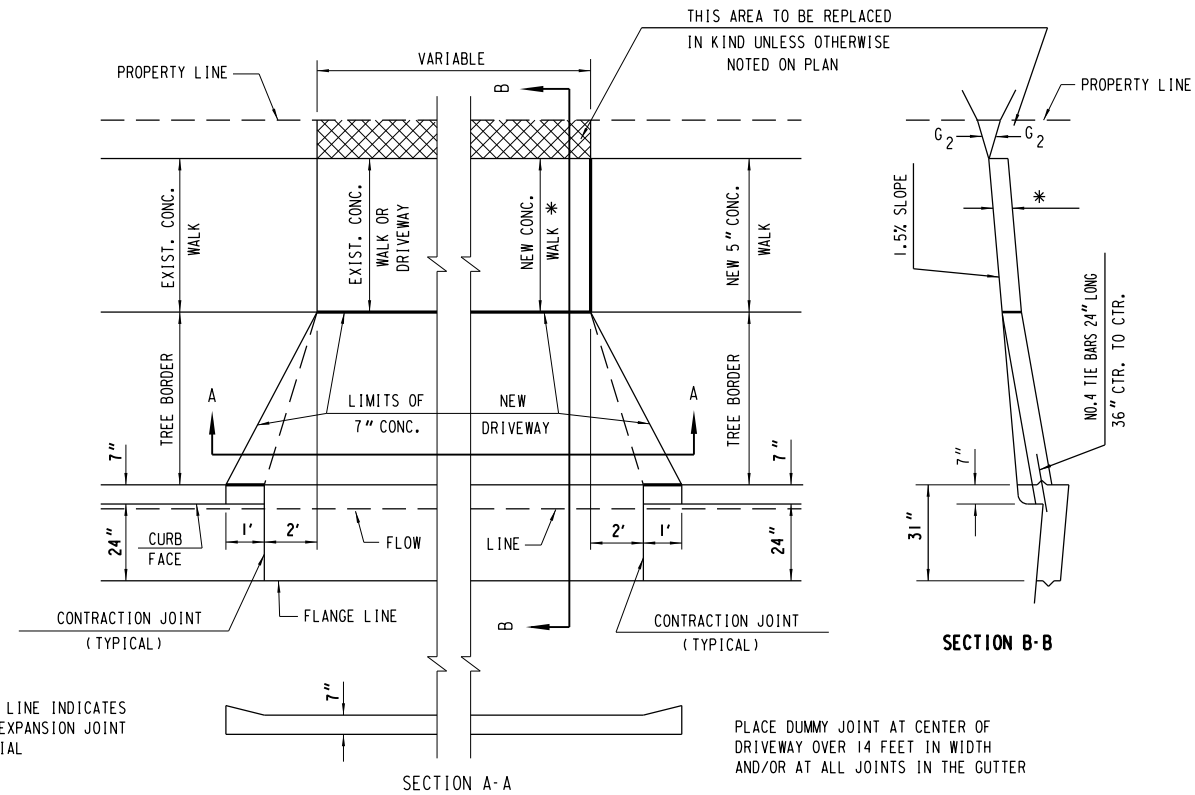
TOWNSHIP 6 NORTH, RANGE 26 EAST
MILWAUKEE, WISCONSIN
CONCRETE MONUMENT W/ BRASS CAP

STATE PLANE COORDINATES OF QUARTER SECTION CORNER
(Y) NORTH: 375,028.22
(X) EAST 2,554,123.90

DATE OF SURVEY: OCTOBER 21, 1997



U.S. PUBLIC SURVEY LAND CORNER
S. 13TH ST. & W. BURNHAM ST.



CONCRETE DRIVEWAY FLARED

©

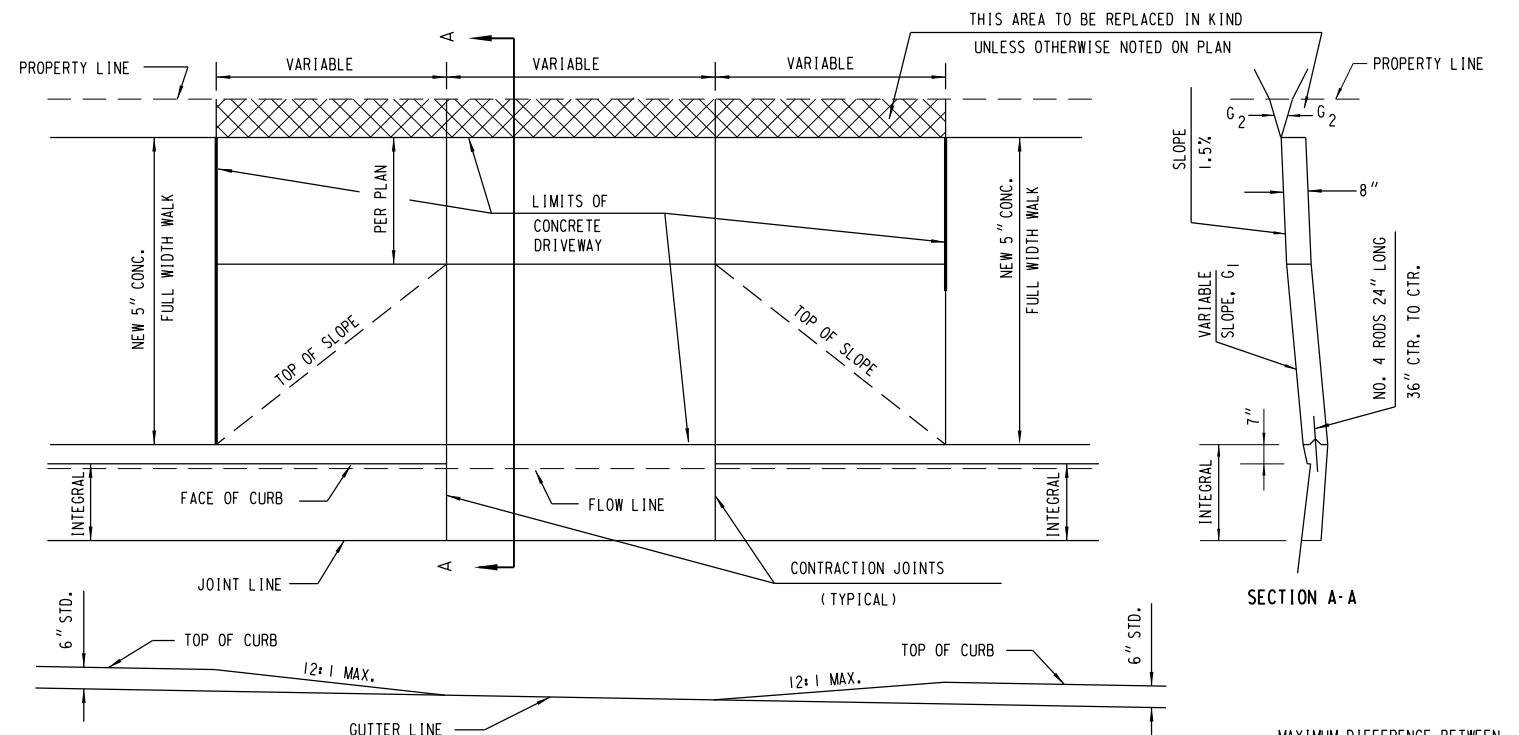
HEAVY LINE INDICATES 1/2" EXPANSION JOINT MATERIAL

PLACE DUMMY JOINTS AT CENTER OF DRIVEWAY AND/OR AT ALL JOINTS IN THE GUTTER

MAXIMUM DIFFERENCE BETWEEN G_1 & G_2 NOT TO EXCEED 15% DESIRABLE MAXIMUM = 10%

MAXIMUM DIFFERENCE BETWEEN G_1 & G_2 IN FILL = 14%

* LOCATIONS PER PLAN: USE 7" CONC. FOR BUSINESS PROPERTY AND 5" CONC. FOR RESIDENTIAL PROPERTY.



DRIVEWAY CONSTRUCTION NOTES

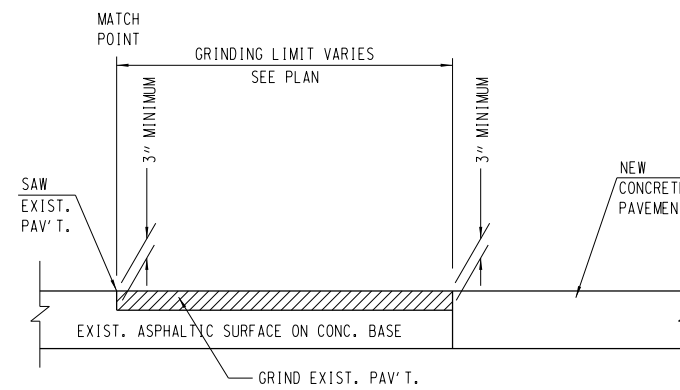
CONSTRUCT DRIVEWAY TO PROPERTY LINE ONLY WHEN MATCHING EXISTING DRIVEWAY AND INSTALL 1/2" EXPANSION JOINT MATERIAL BETWEEN NEW AND OLD DRIVEWAY, PLACE DUMMY JOINT AT CENTER OF DRIVEWAY AND AT ALL JOINTS IN THE GUTTER

DEPRESSED CONCRETE DRIVEWAY (MODIFIED) HES

ⓓ

MAXIMUM DIFFERENCE BETWEEN G_1 & G_2 NOT TO EXCEED 15% DESIRABLE MAXIMUM = 10%

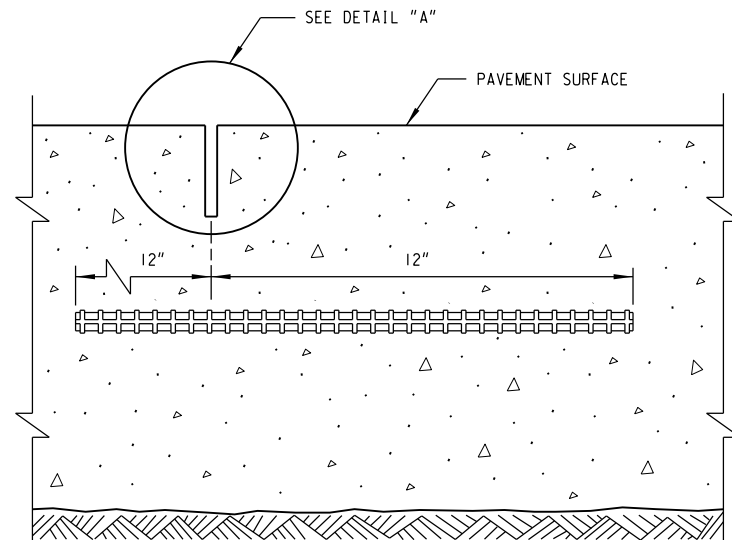
MAXIMUM DIFFERENCE BETWEEN G_1 & G_2 IN FILL = 14%



REMOVING ASPHALTIC SURFACE BUTT JOINTS

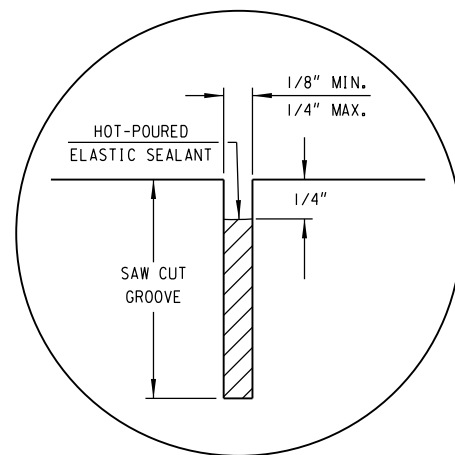
IN ROADWAY AT INTERSECTIONS AND ABUTTING PAVEMENT

JOINTS WITH HOT POURED SEALANT



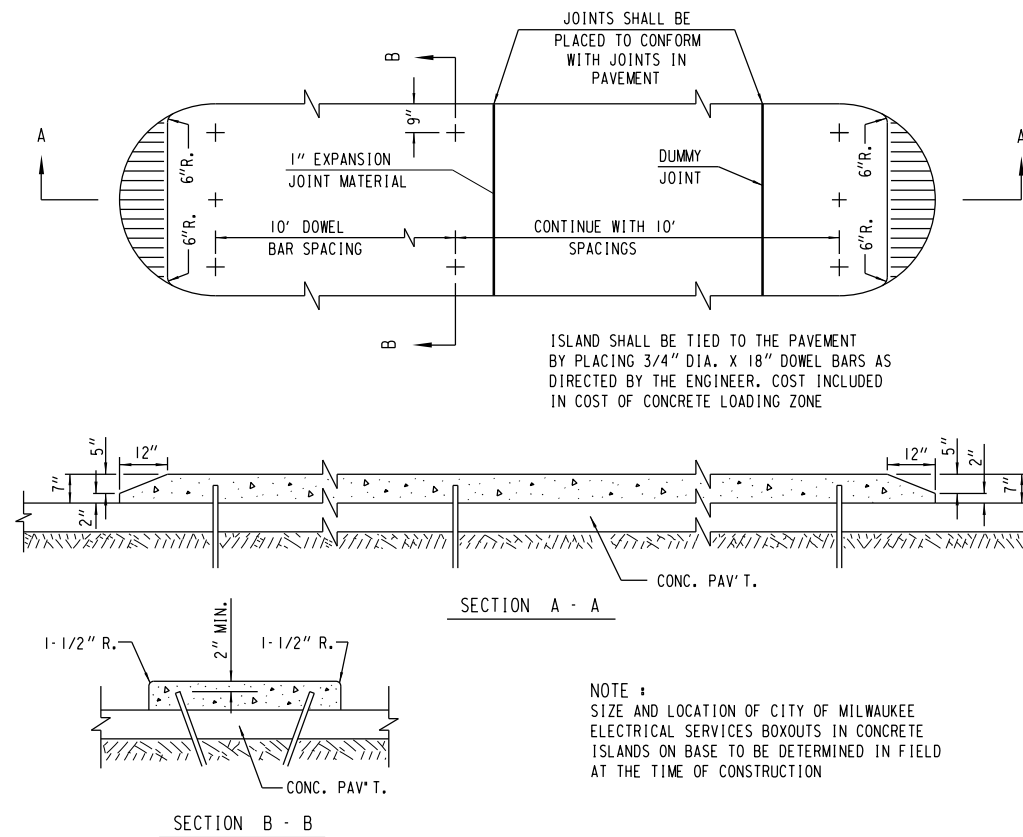
SAWED JOINT

NOTE: DETAIL "A" SHOWN IN S.D.D. "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND PAVEMENT TIES" HAS BEEN REVISED AND SHOWN AS "JOINT DETAIL A".



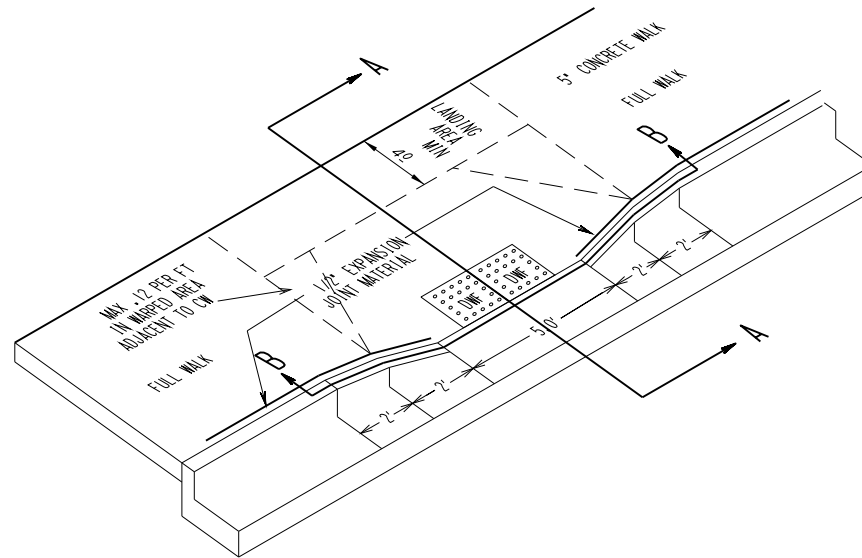
JOINT DETAIL "A"

PAVEMENT DEPTH AND JOINT SPACING TABLE	
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6"	12'
7"	14'
8"	15'
9"	15'
10" & ABOVE	18'

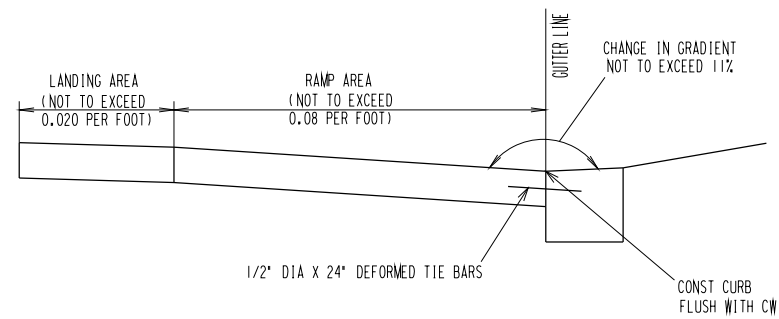


CONCRETE LOADING ZONE
(WITH SNOWPLOWABLE NOSE)

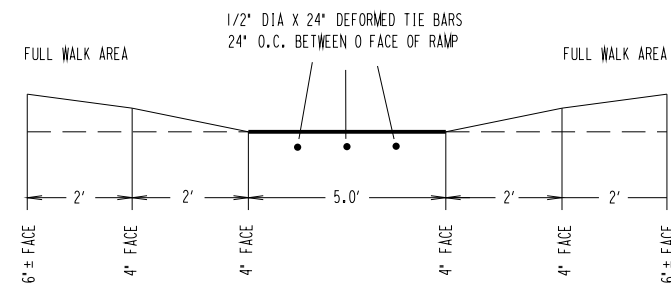
(Z)



SECTION A-A
(NOT TO SCALE)

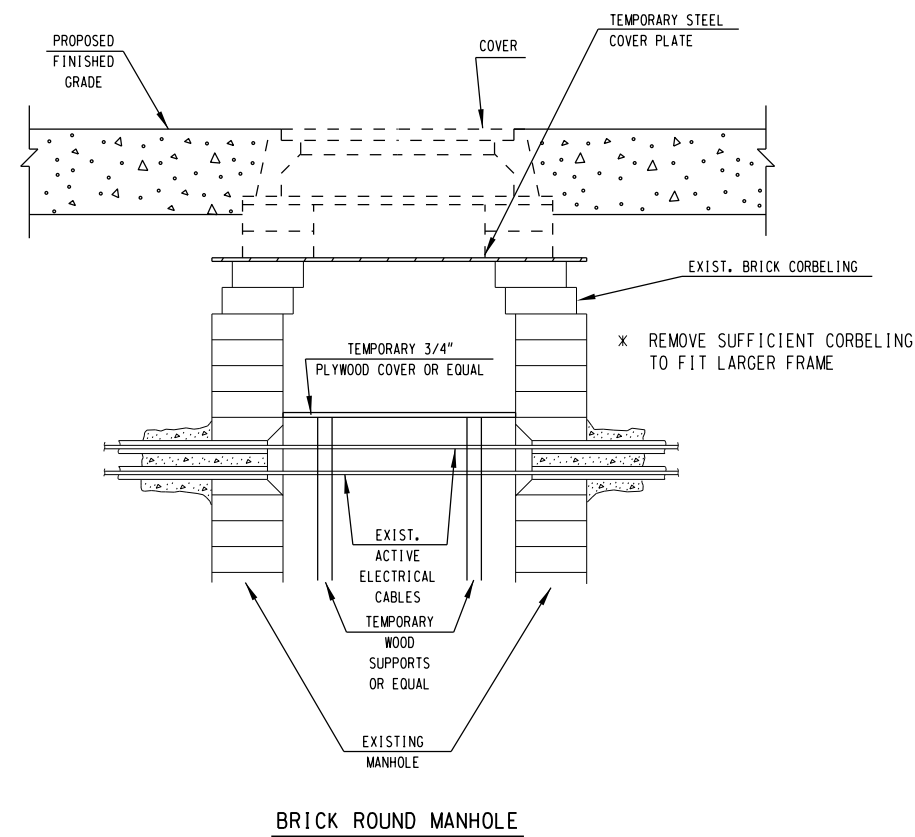
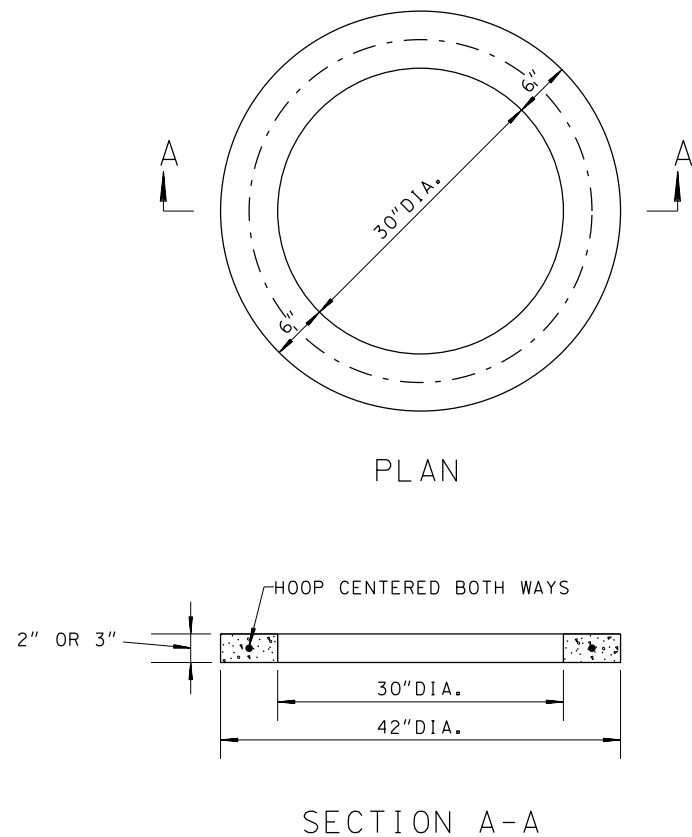
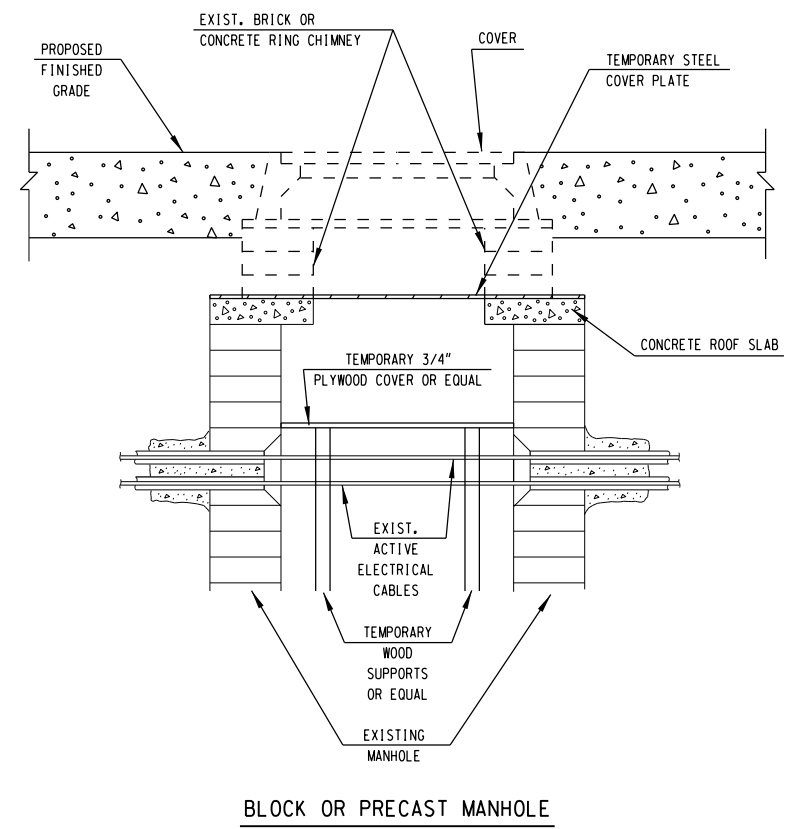


SECTION B-B
(NOT TO SCALE)



TYPE - 7A RAMP MODIFIED

(7AM)



THE ADJUSTING RING SHALL BE 2" OR 3" IN HEIGHT.

THE CIRCUMFERENTIAL STEEL SHALL BE CENTERED WITHIN THE RING.

AREA OF CIRCUMFERENTIAL STEEL = 0.07 SQ. INCH PER VERTICAL FOOT WITH A MINIMUM OF .024 SQ. INCH IN ANY ONE RING.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE CORE SHALL BE 4000 P.S.I.

CONCRETE ADJUSTING RING

ADJUSTING TES MANHOLES

CURB RAMP GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN $\frac{1}{8}$ -INCH ARE ALLOWED.

ABSOLUTE MAXIMUM 12H:1V (7.00%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

ALL CURB RADII ARE MEASURED TO THE FACE OF CURB FOR THE CURB SECTIONS AT CORNERS

ALL OTHER NOTES ARE NOT NUMBERED

THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

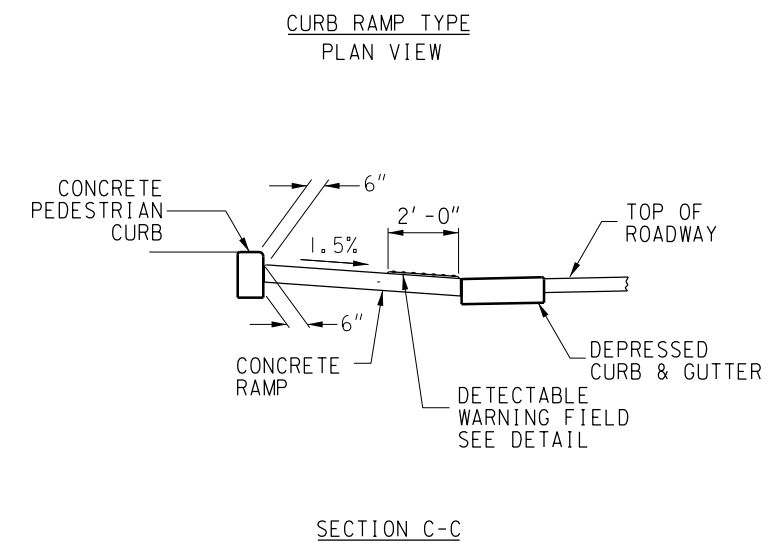
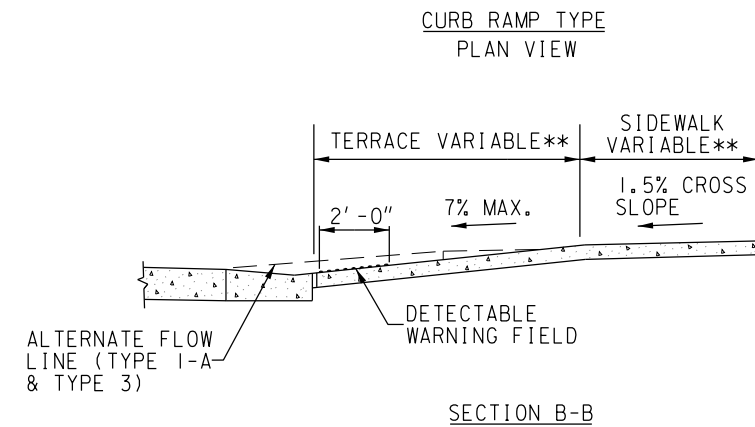
WHEN ADDING ELEVATIONS TO LANDINGS SHOWN IN THE PLAN PROVIDE A LEVEL LANDING (MAXIMUM 1.5% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

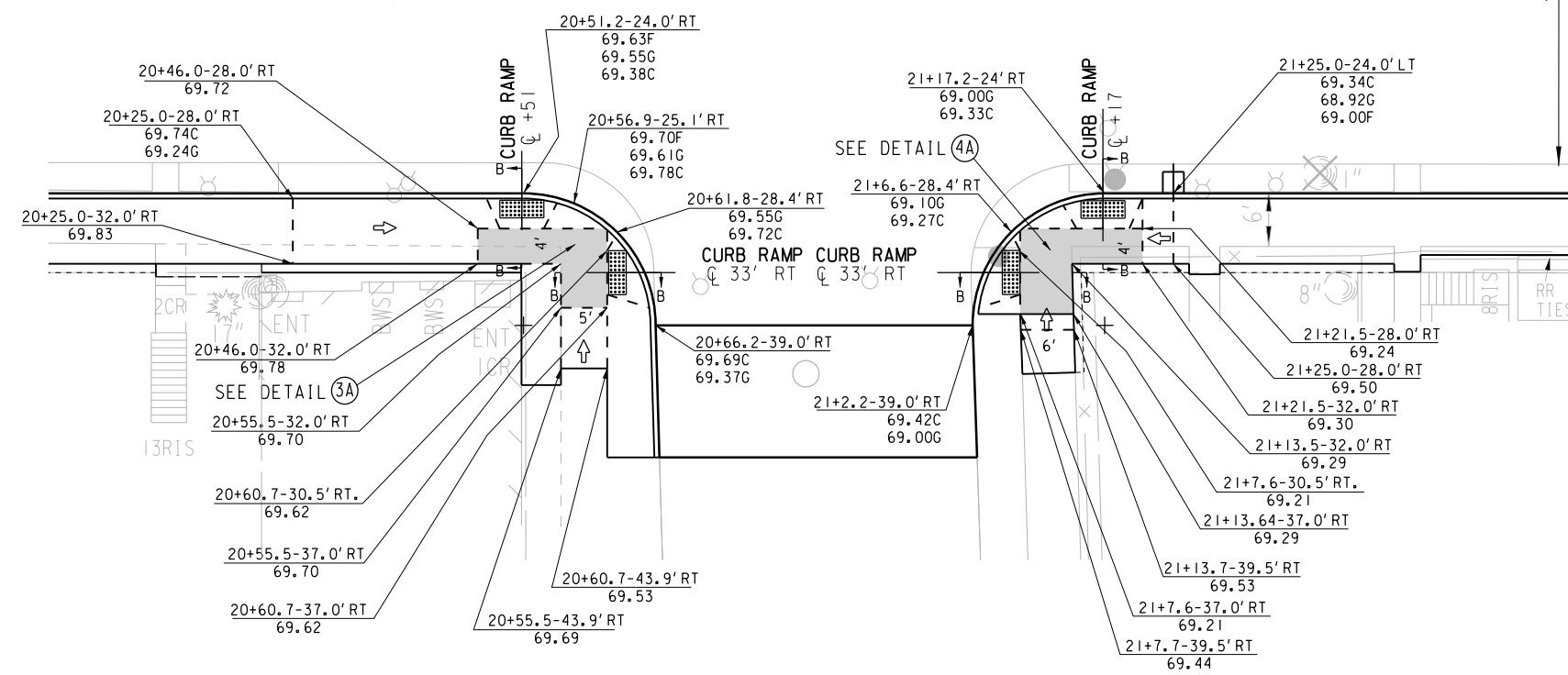
WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

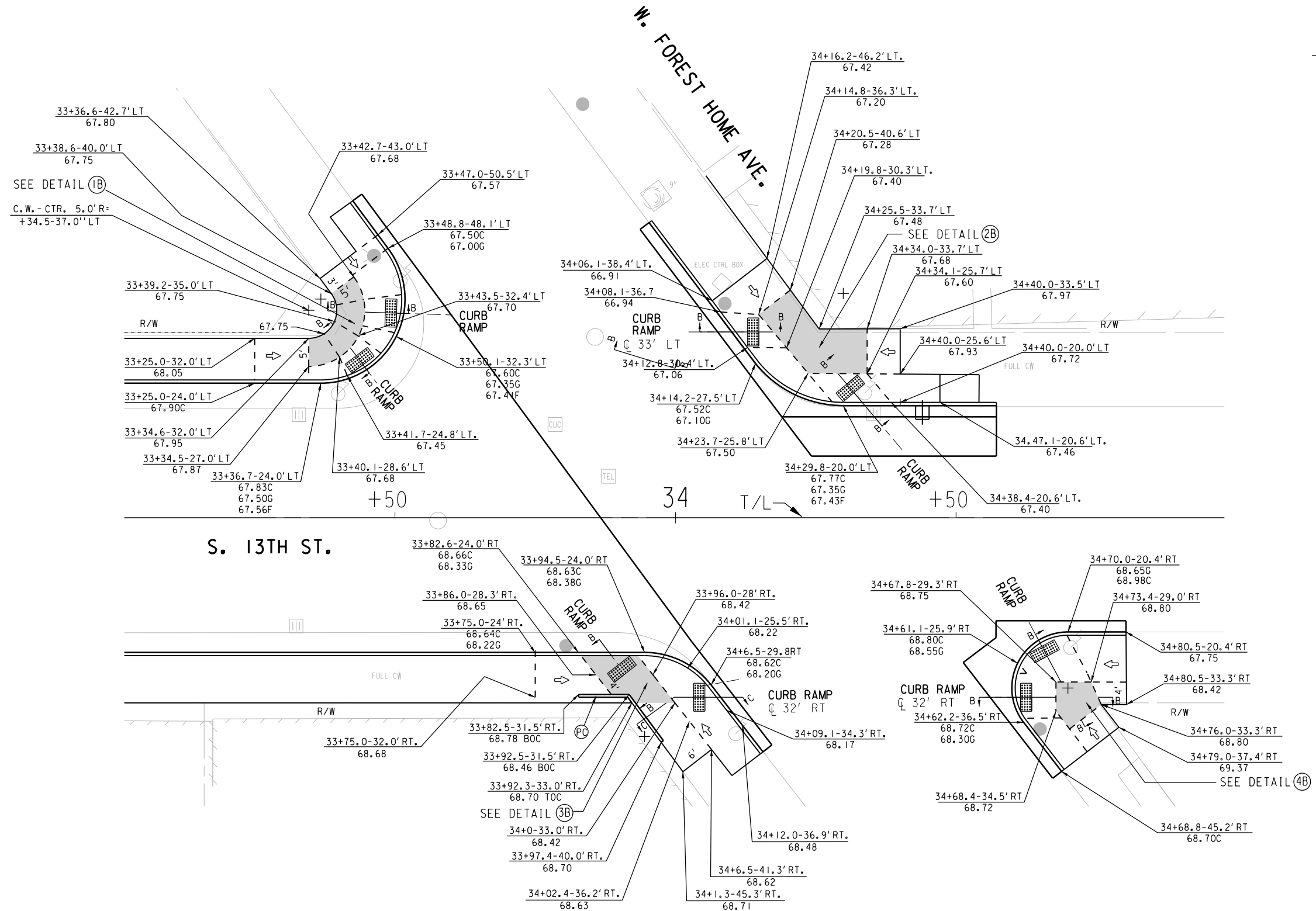
CURB RAMP LEGEND

-  DETECTABLE WARNING FIELD
-  PAVEMENT MARKING CROSSWALK (WHITE)
-  1/2" EXPANSION JOINT
-  LANDING AREA

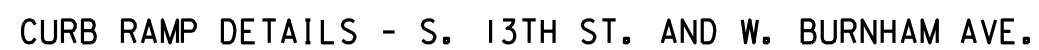




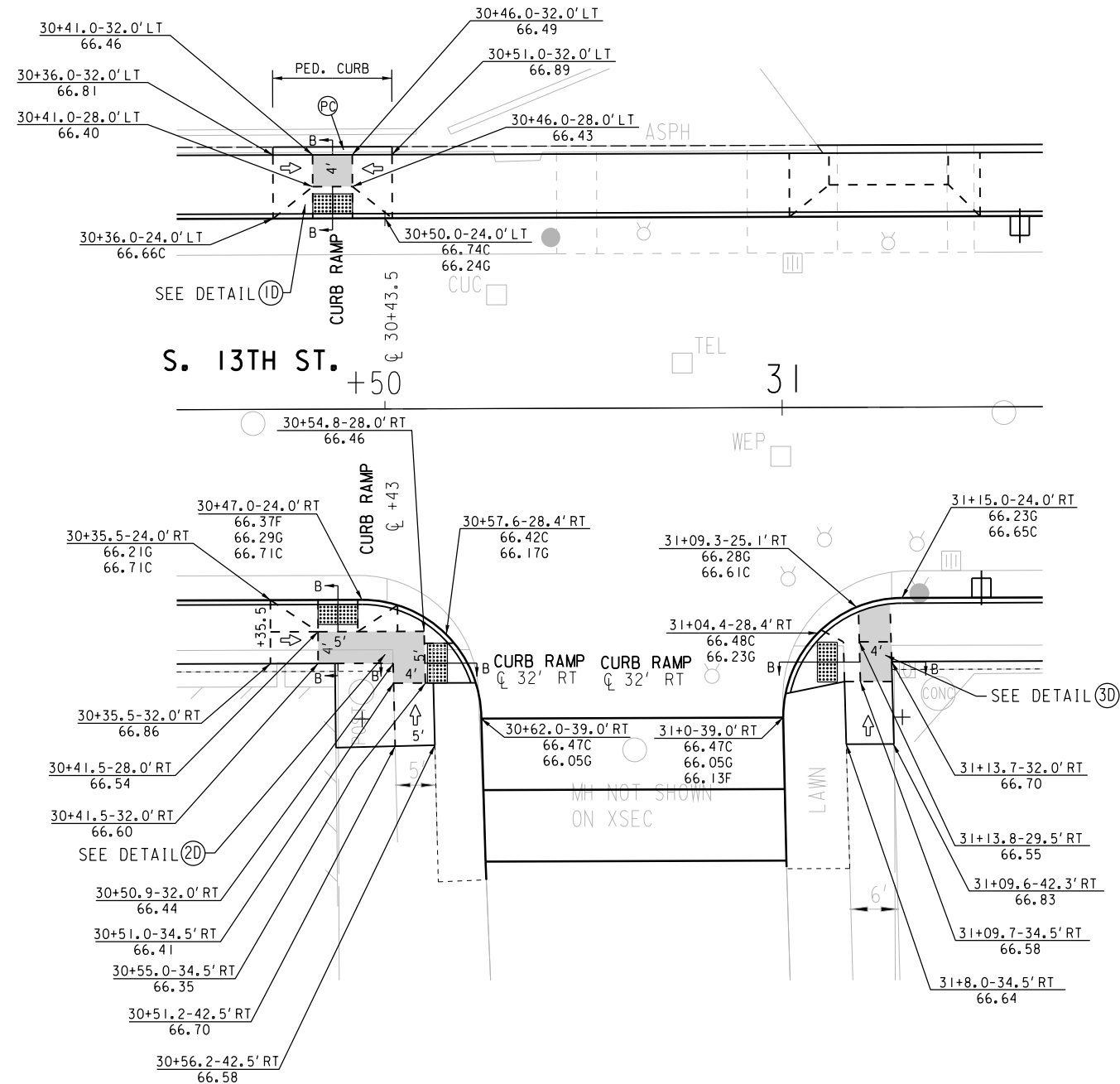
 LANDING AREA
 TRANSITION AREA



CURB RAMP DETAILS - S. 13TH ST. AND W. FOREST HOME AVE.

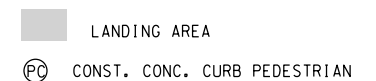


 LANDING AREA
 TRANSITION AREA

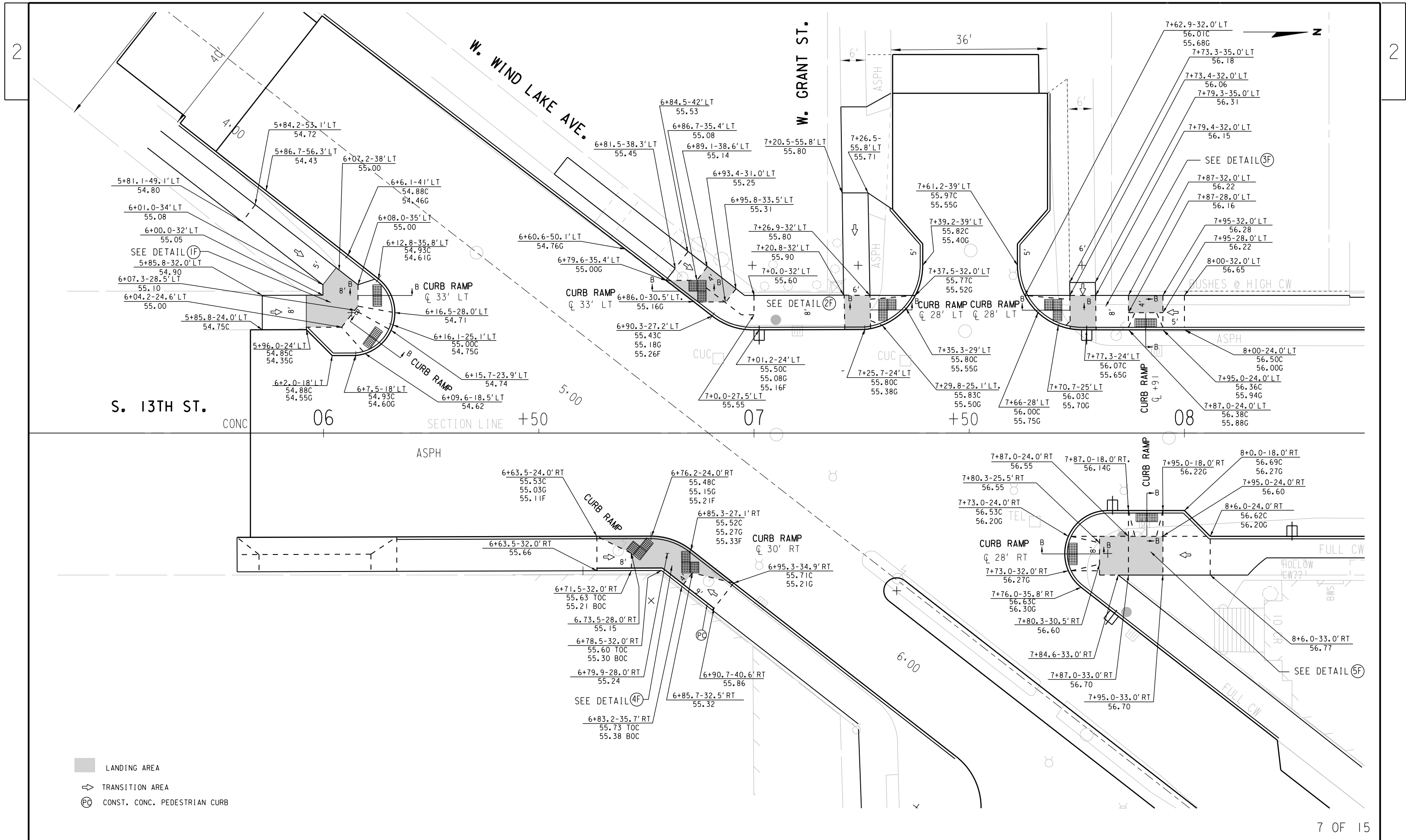


CURB RAMP DETAILS - S. 13TH ST. AND W. MAPLE ST.

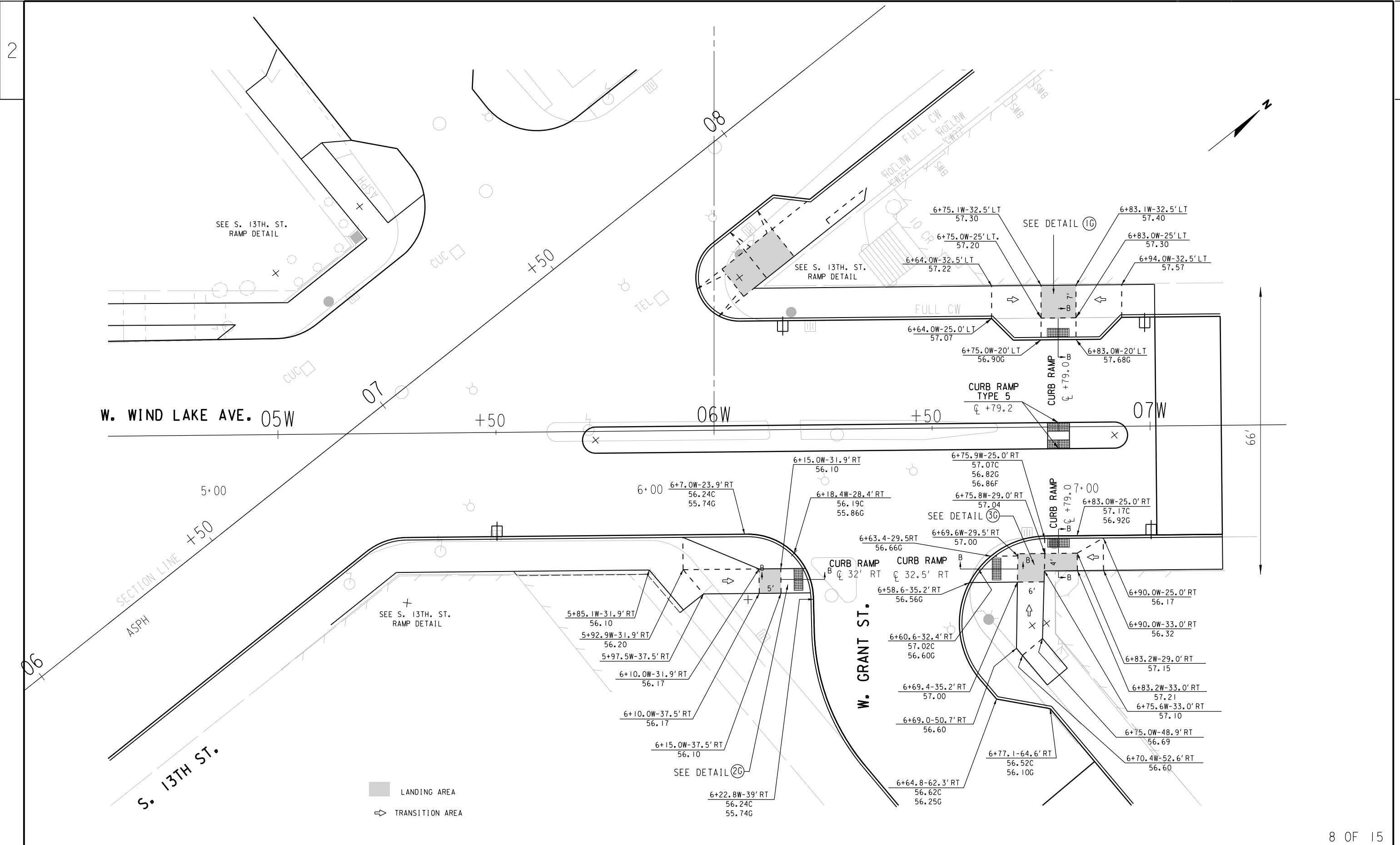
- LANDING AREA
- CONST. CONC. CURB PEDESTRIAN
- TRANSITION AREA

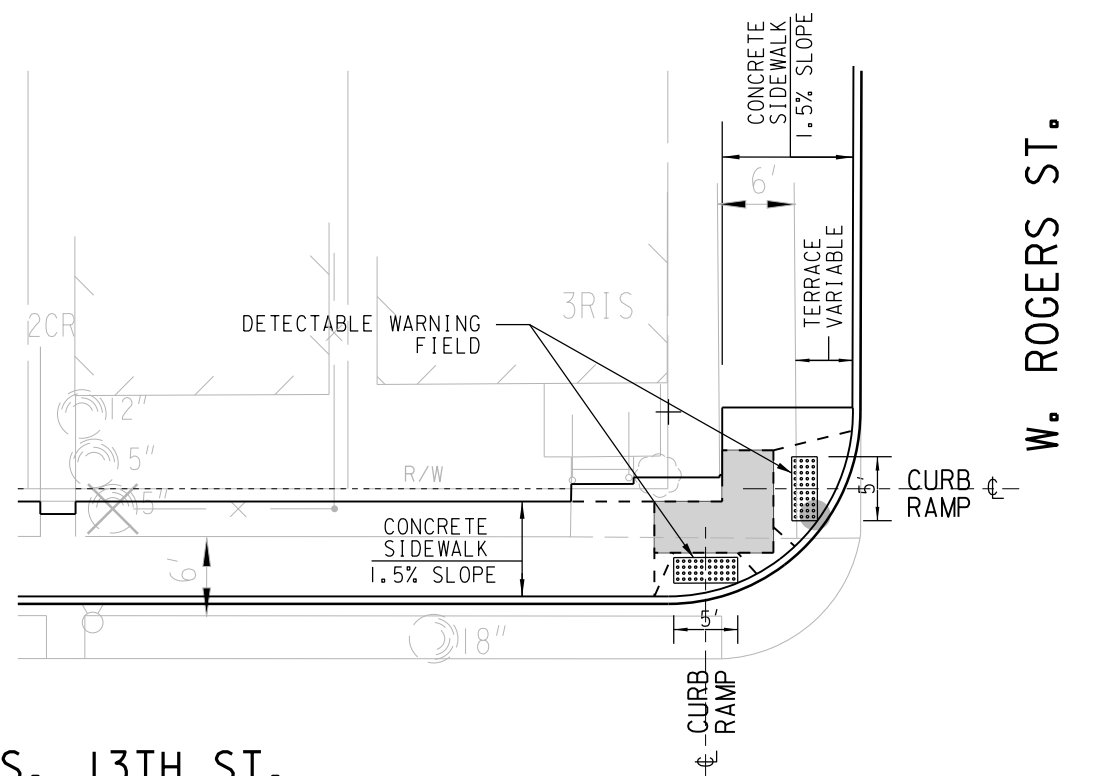


CURB RAMP DETAILS - S. 13TH ST. AND W. BECHER ST.



- LANDING AREA
- TRANSITION AREA
- CONST. CONC. PEDESTRIAN CURB

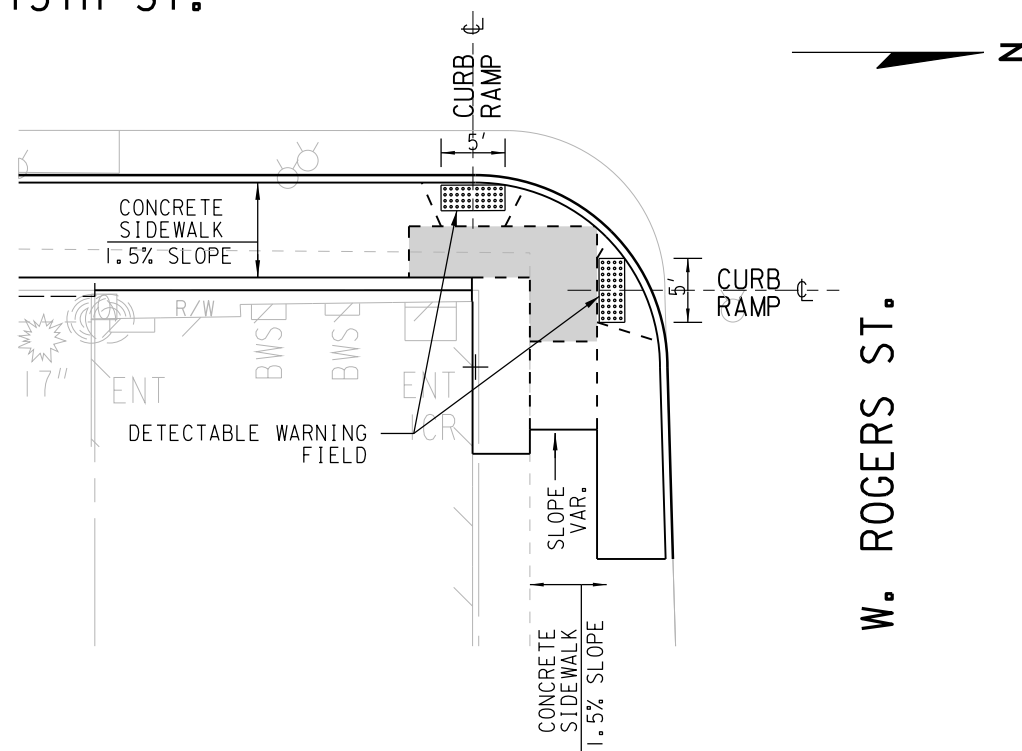




1A

S. 13TH ST.

S. 13TH ST.

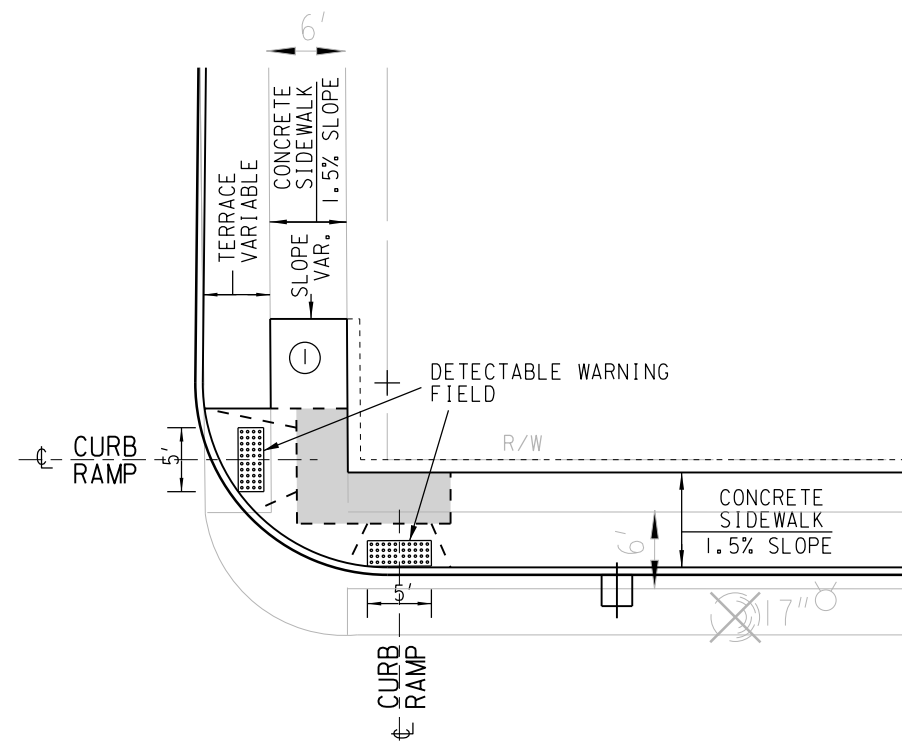


3A

W. ROGERS ST.

W. ROGERS ST.

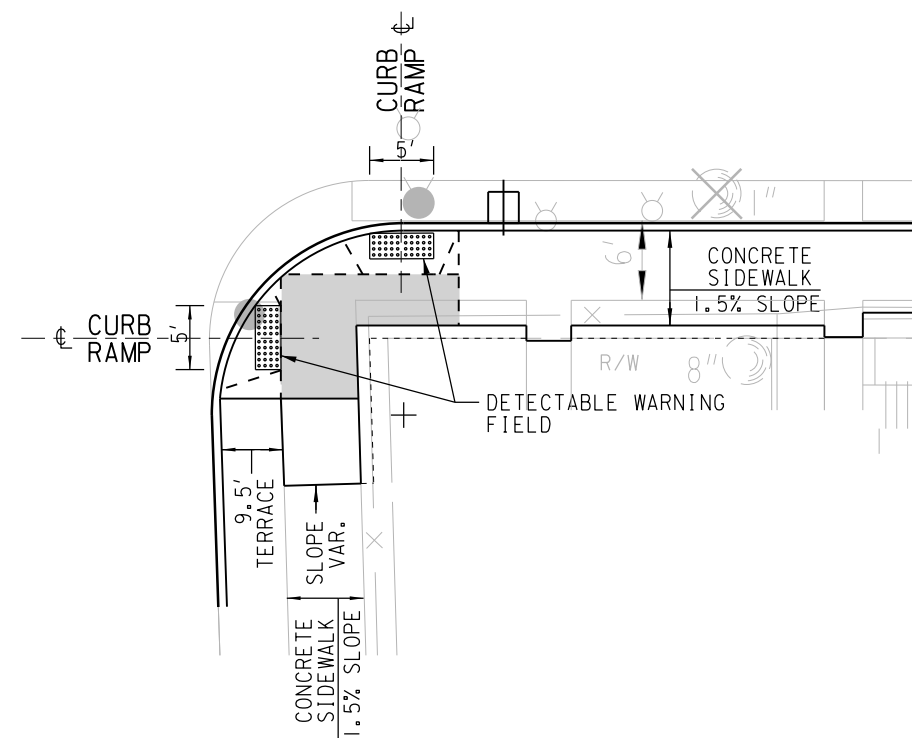
W. ROGERS ST.



2A

S. 13TH ST.

S. 13TH ST.

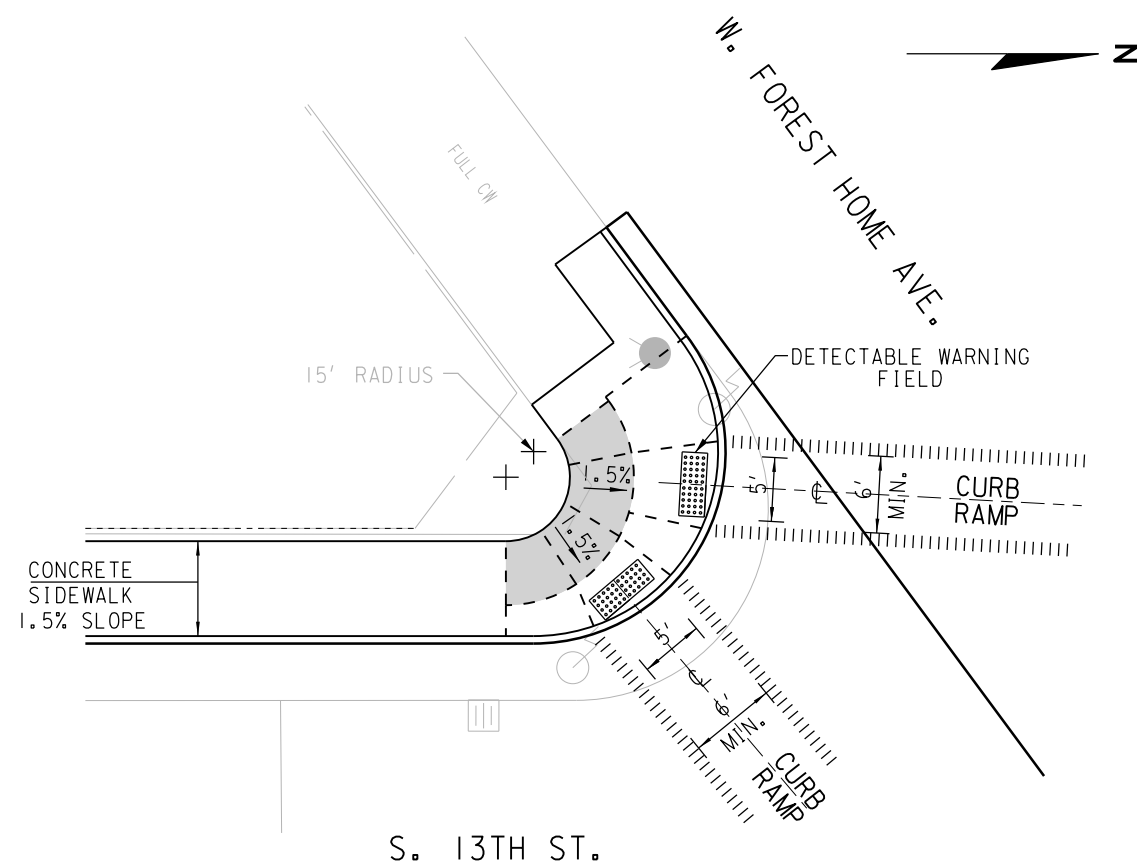


4A

CURB RAMP DETAILS - S. 13TH ST. AND W. ROGERS ST.

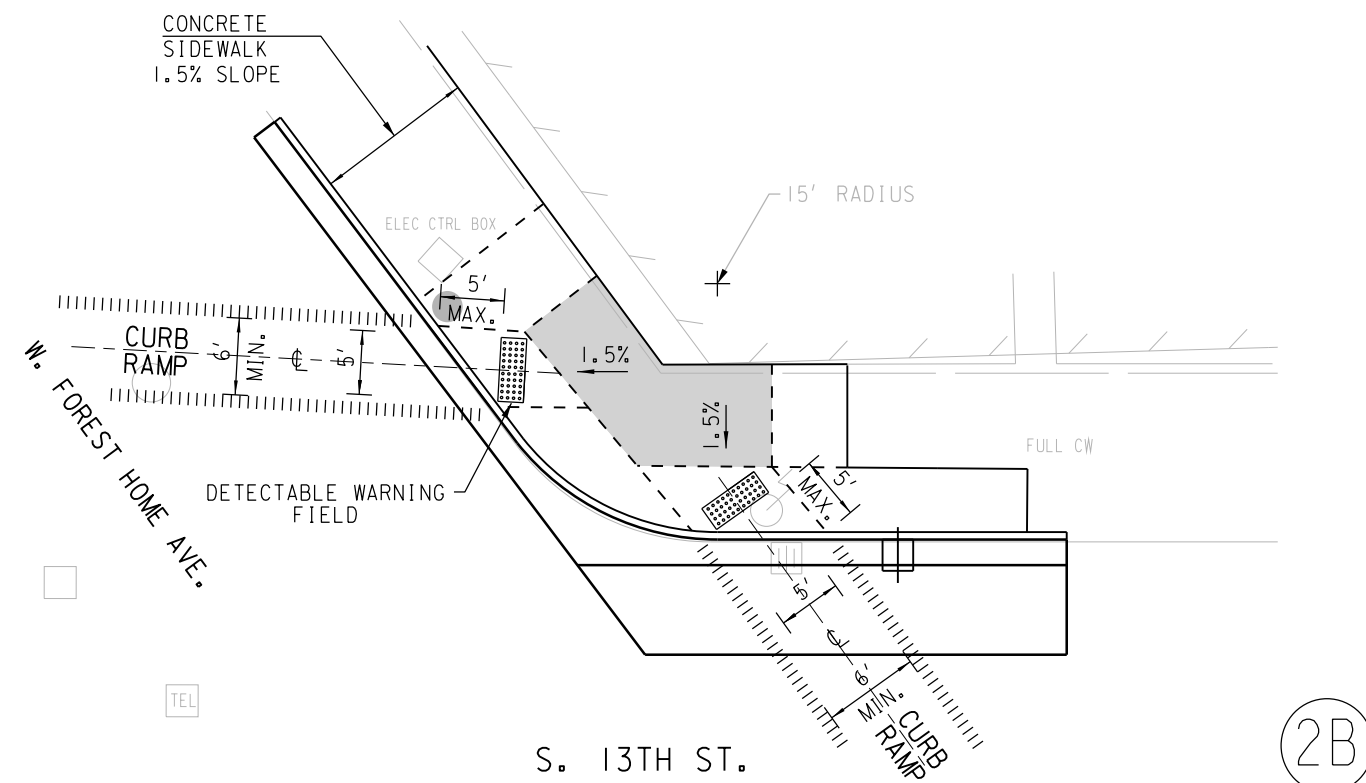
9 OF 15

2

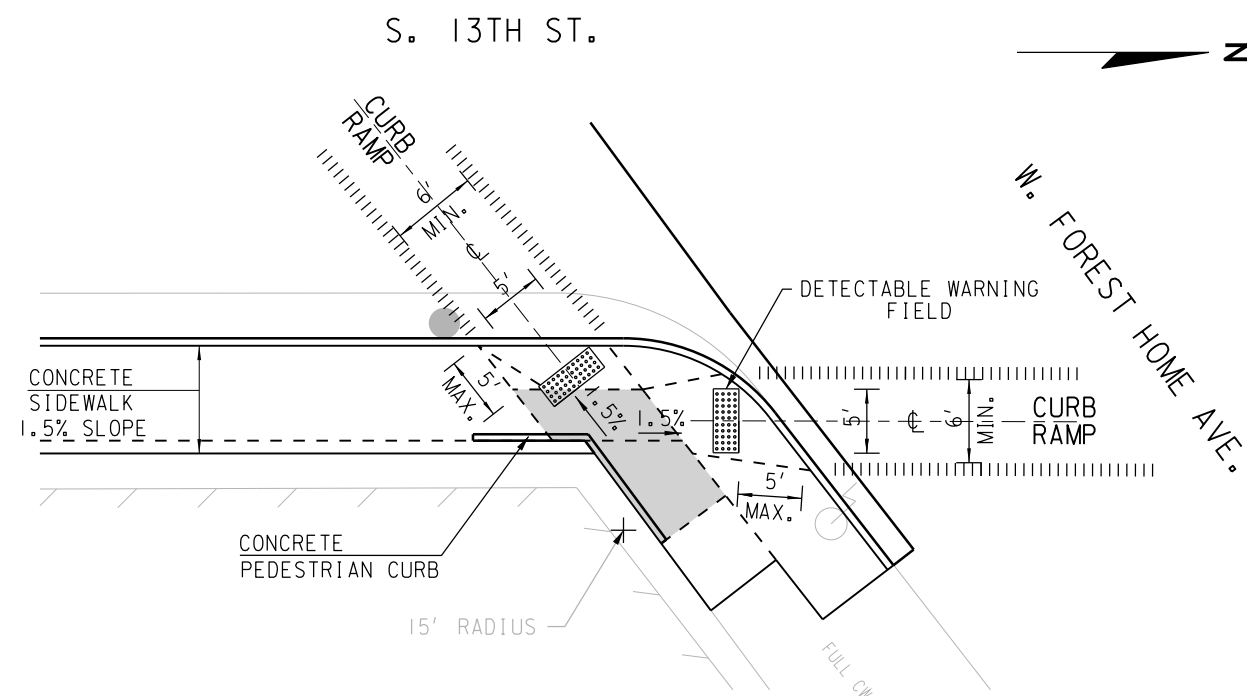


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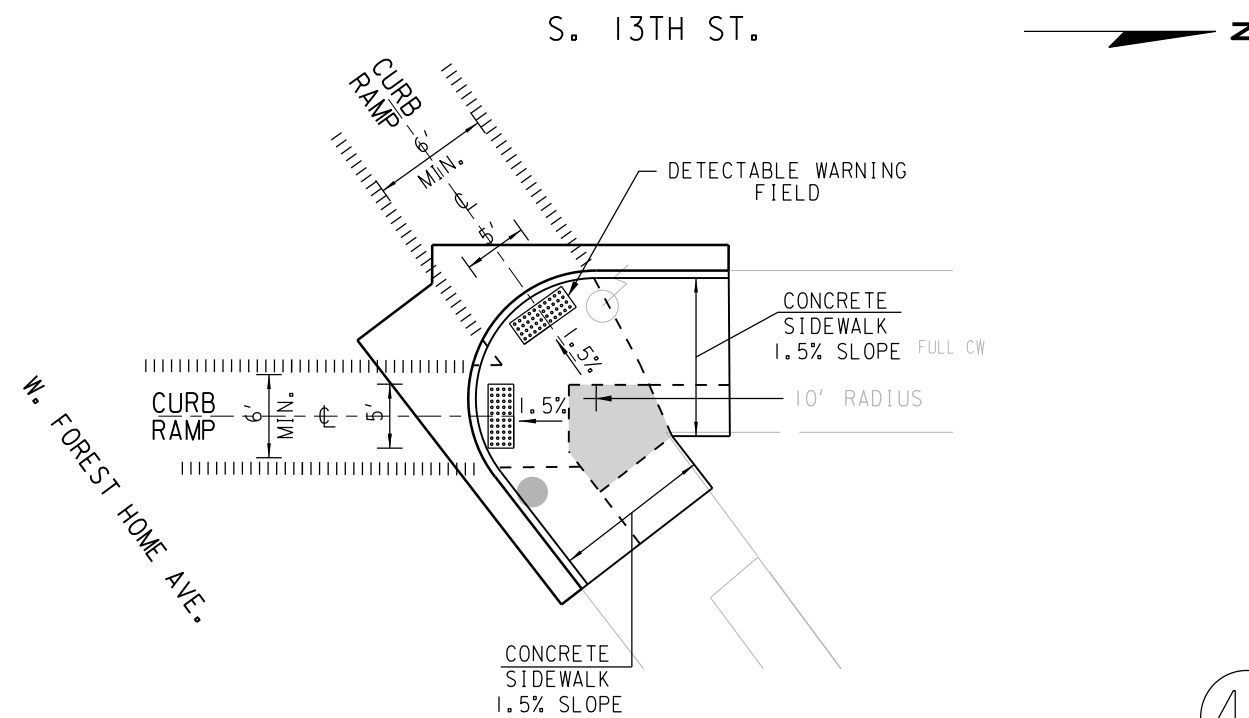
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2B



3B

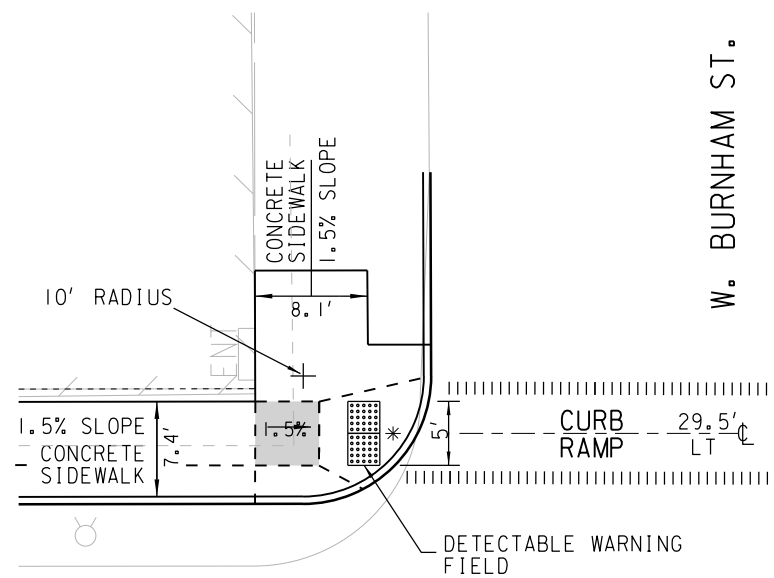


4B

CURB RAMP DETAILS - S. 13TH ST. AND W. FOREST HOME AVE.

10 OF 15

2

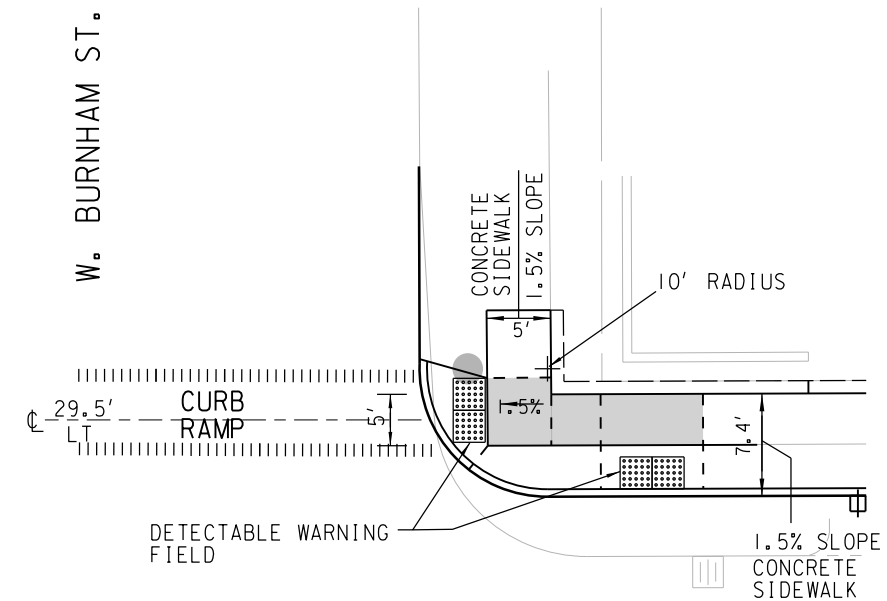


S. 13TH ST.

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE

1C

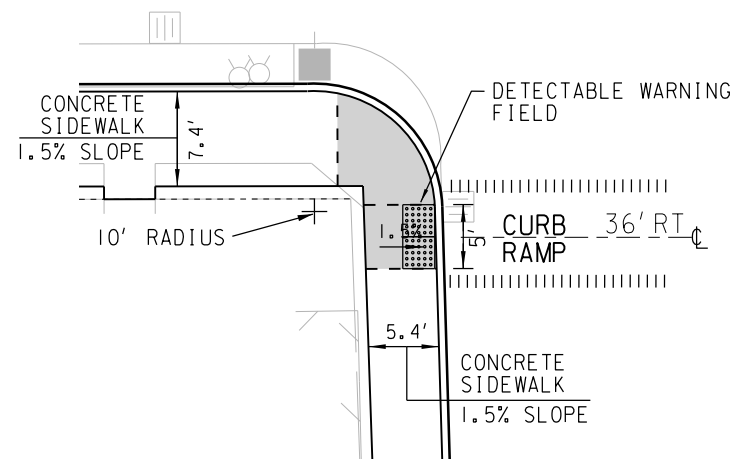
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S. 13TH ST.

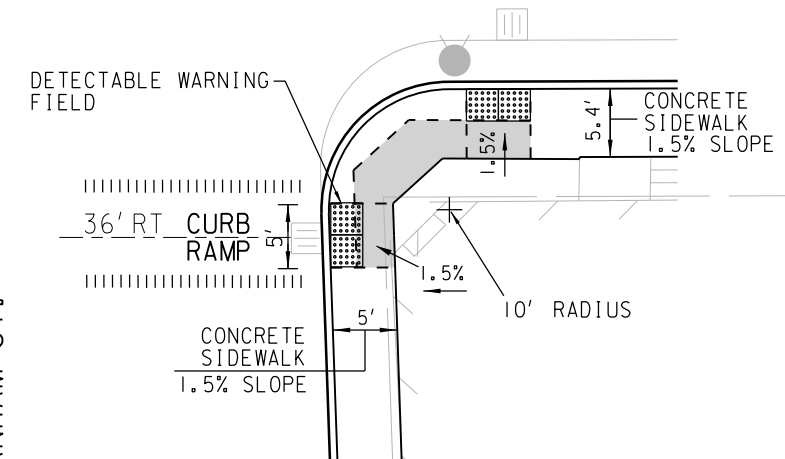
2C

S. 13TH ST.



3C

S. 13TH ST.



4C

CURB RAMP DETAILS - S. 13TH ST. AND W. BURNHAM AVE.

11 OF 15

STATE PROJECT NUMBER 2505-00-75

- -

HWY: LOCAL STREET

COUNTY: MILWAUKEE

CONSTRUCTION DETAILS

SCALE FEET



SHEET NO:

25

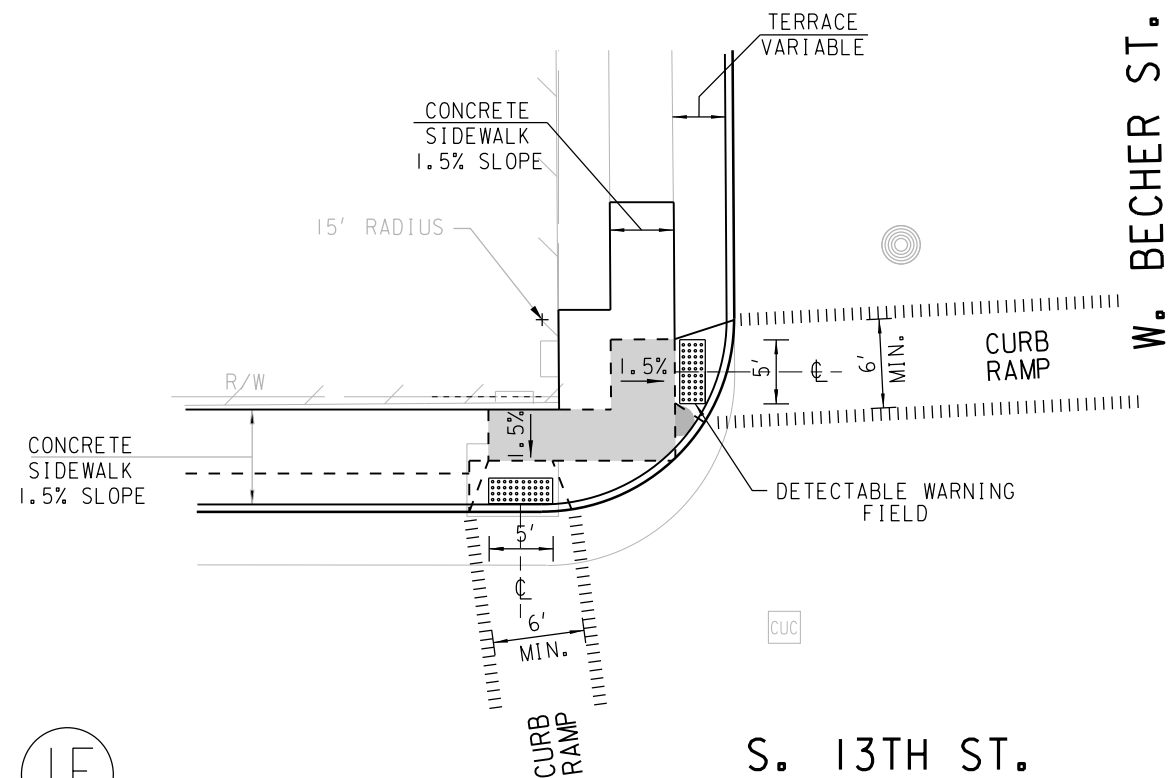
E

2



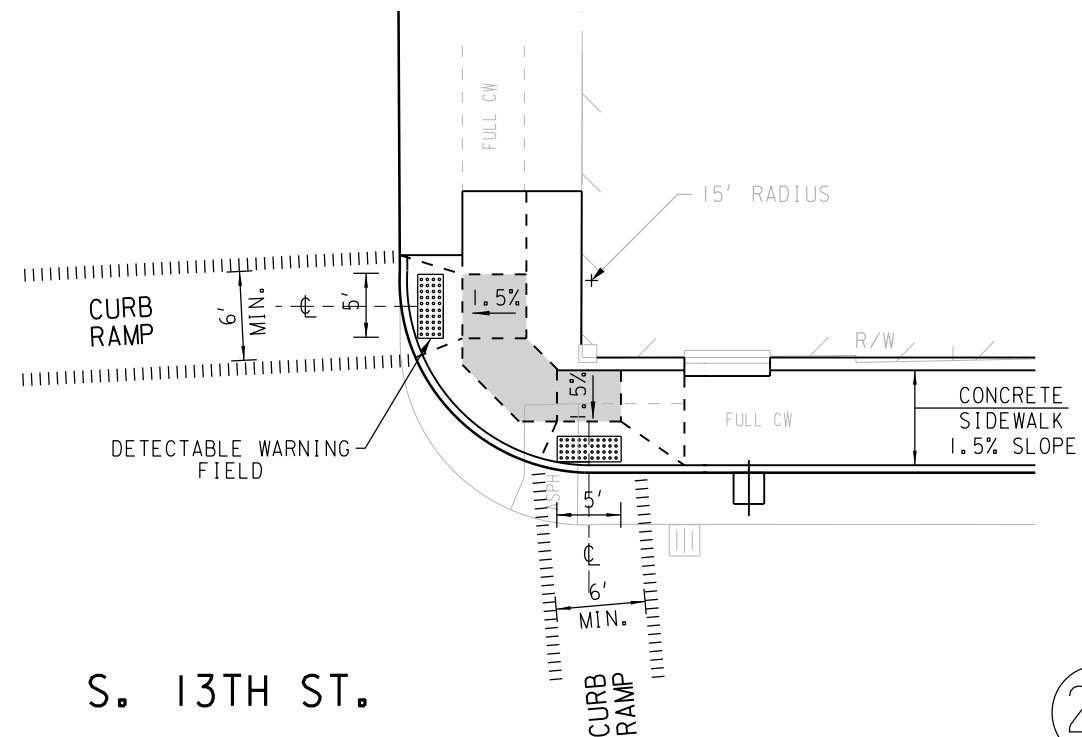
CURB RAMP DETAILS - S. 13TH ST. AND W. MAPLE ST.

2



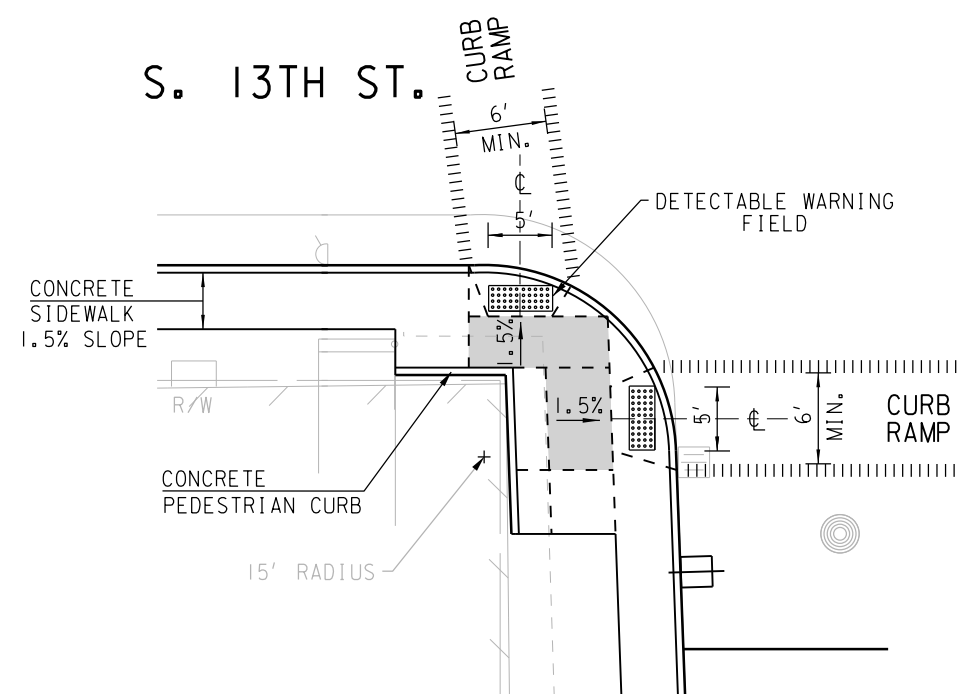
1E

W. BECHER ST.



2E

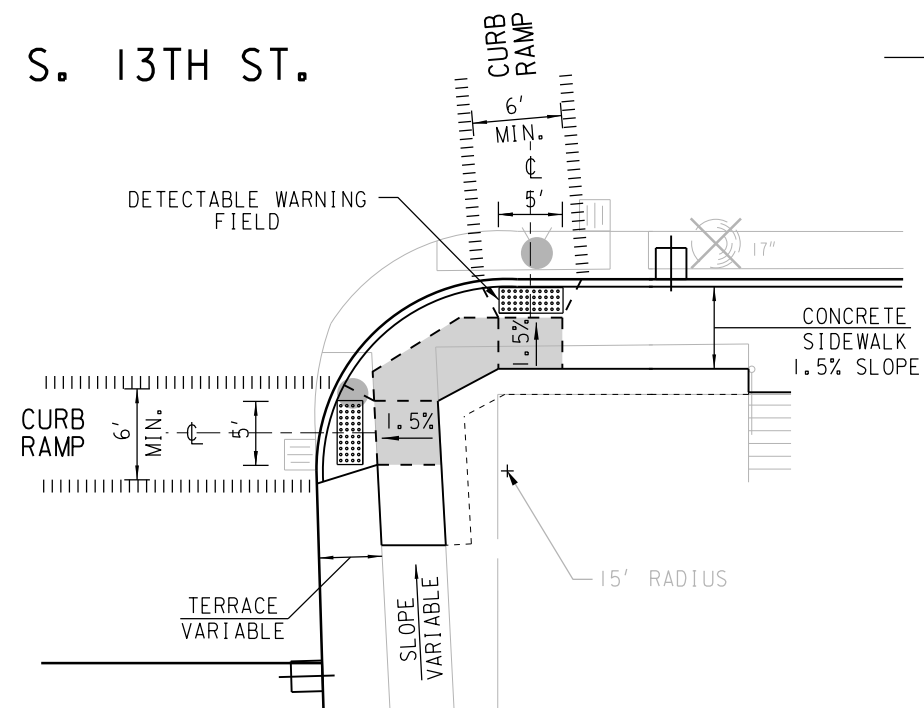
S. 13TH ST.



3E

W. BECHER ST.

S. 13TH ST.



4E

CURB RAMP DETAILS - S. 13TH ST. AND W. BECHER ST.

13 OF 15

STATE PROJECT NUMBER 2505-00-75

HWY: LOCAL STREET

COUNTY: MILWAUKEE

CONSTRUCTION DETAILS

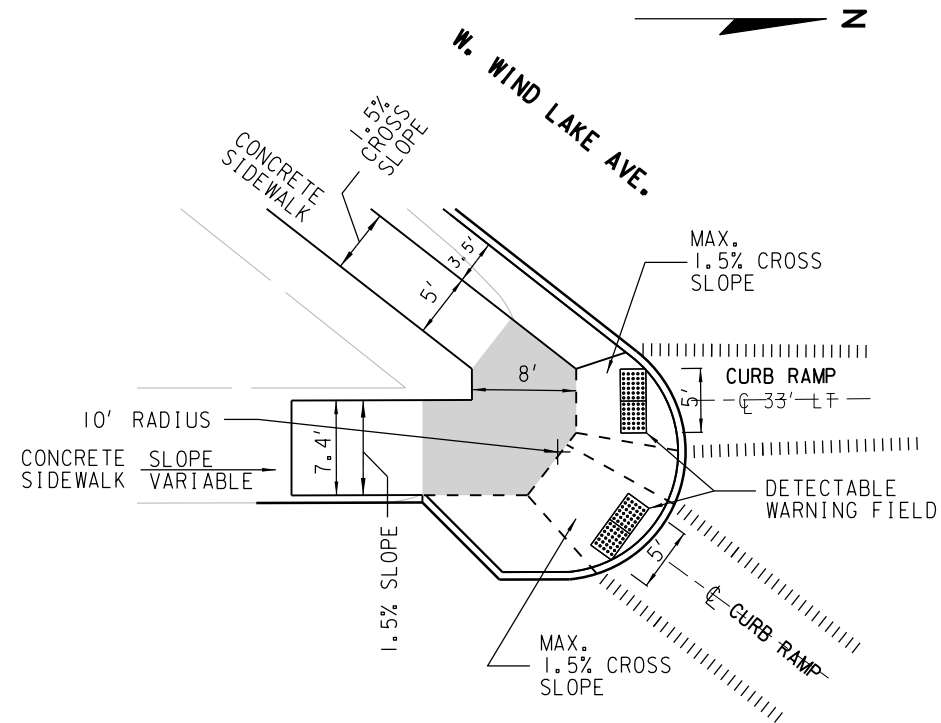
SCALE FEET



SHEET NO: 27

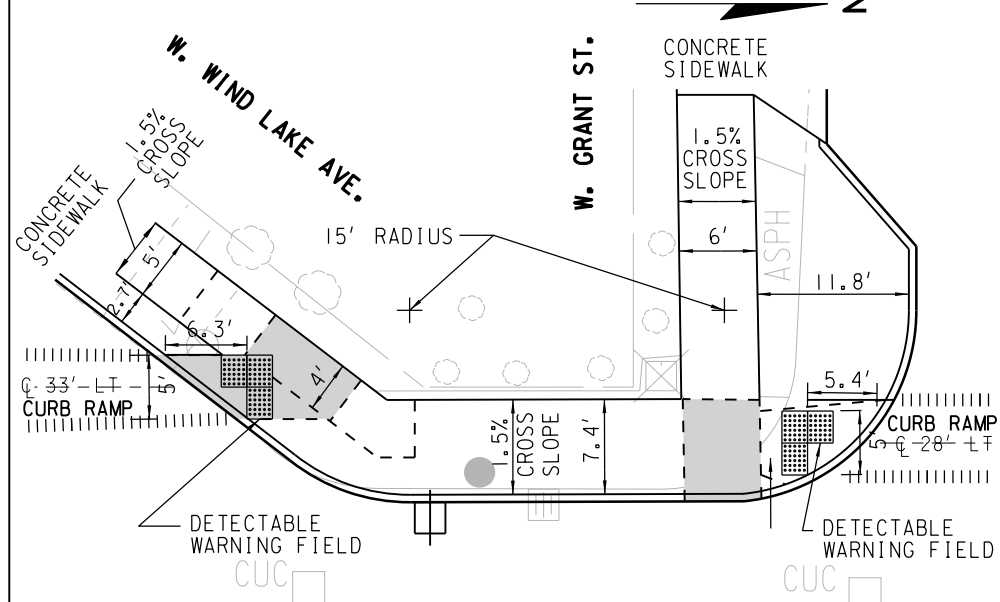
E

2



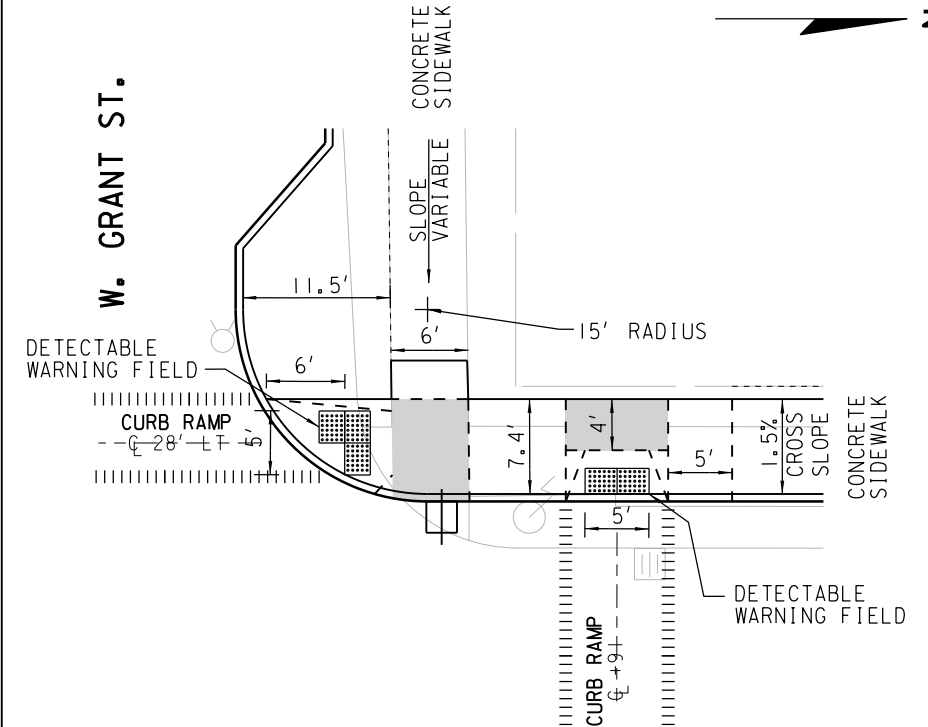
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S. 13TH ST.



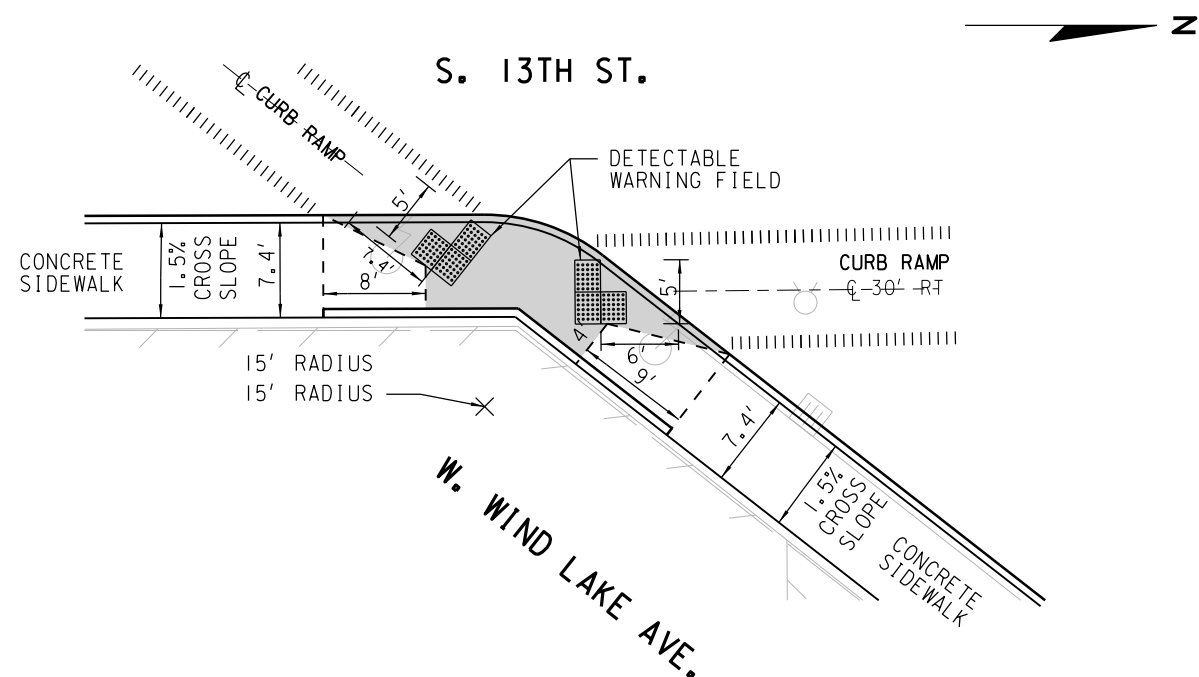
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S. 13TH ST.



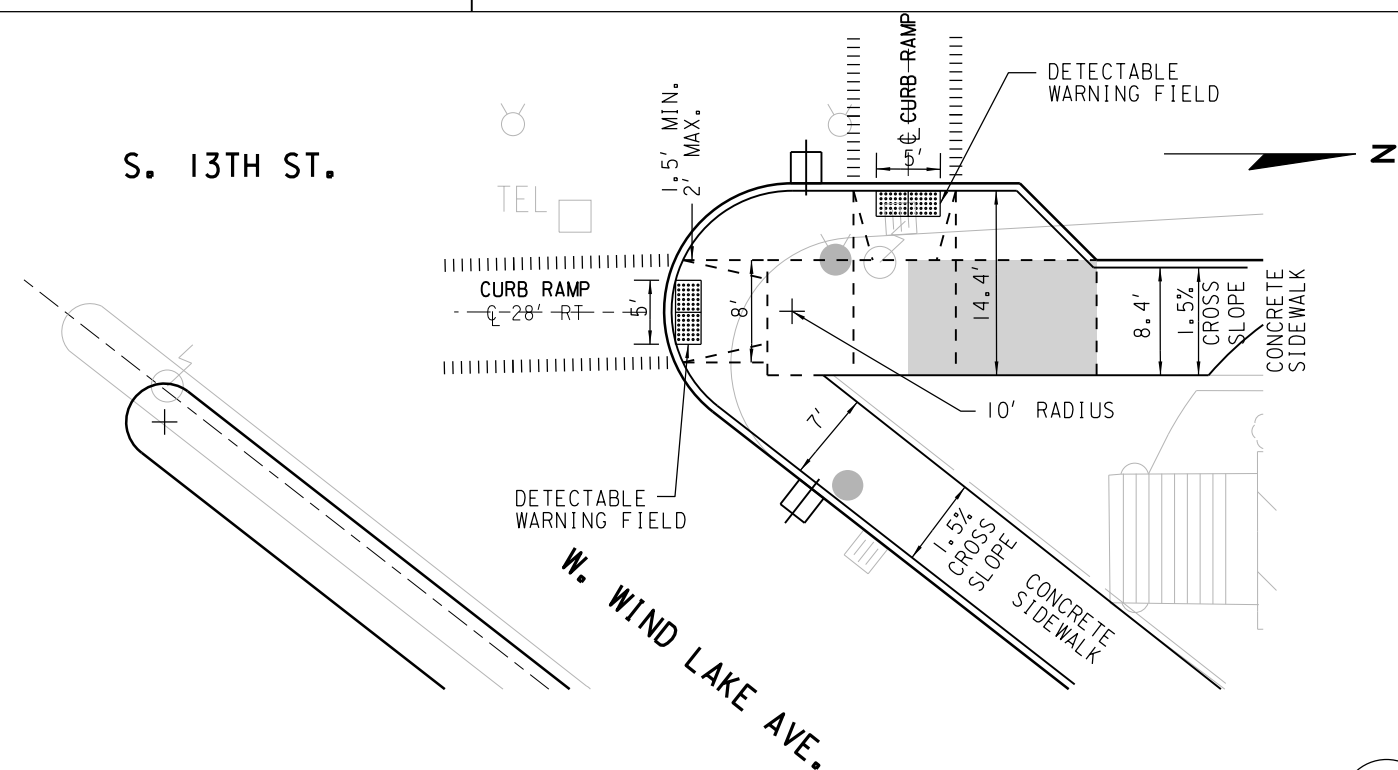
3F

S. 13TH ST.



4F

CURB RAMP DETAILS - S. 13TH ST. W. WIND LAKE AVE., & W. GRANT ST.



5F

14 OF 15



15 OF 15

BEGIN CONSTRUCTION
W. WINDLAKE AVE.
STA. 03 +54.62 T/L

BEGIN PROJECT
S. 13TH ST.
STA. 05 +83.00 T/L

+50

05

+50

06

SECTION LINE +50

07

+50 S. 13TH ST. T/L

08

+50

09

+50

10

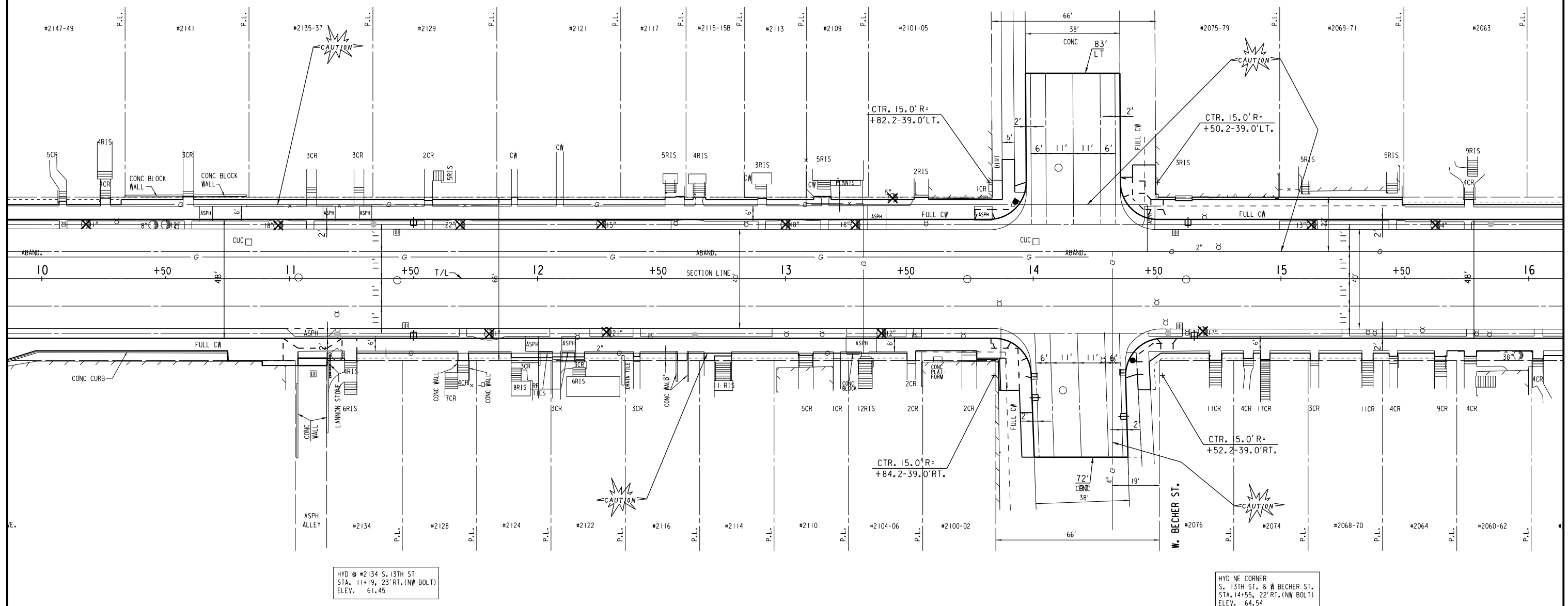
SOUTH CURBLINE

CURVE DATA
RAD. = 50.0'
I L = 40° 08' 58"
L.C. = 34.32'
P.C. = 6W+22.9, 46.0' RT.
P.T. = 6W+34.5, 77.3' RT.
ARC = 35.04'

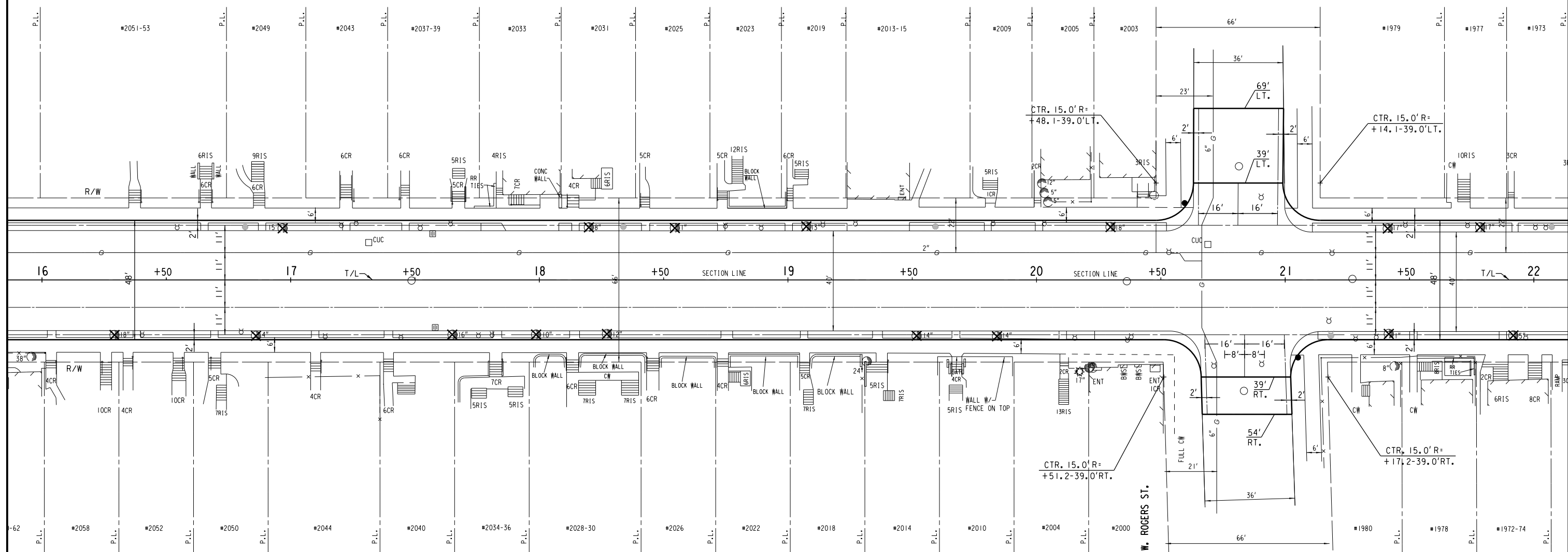
SOUTH

13TH

STREET



STREET



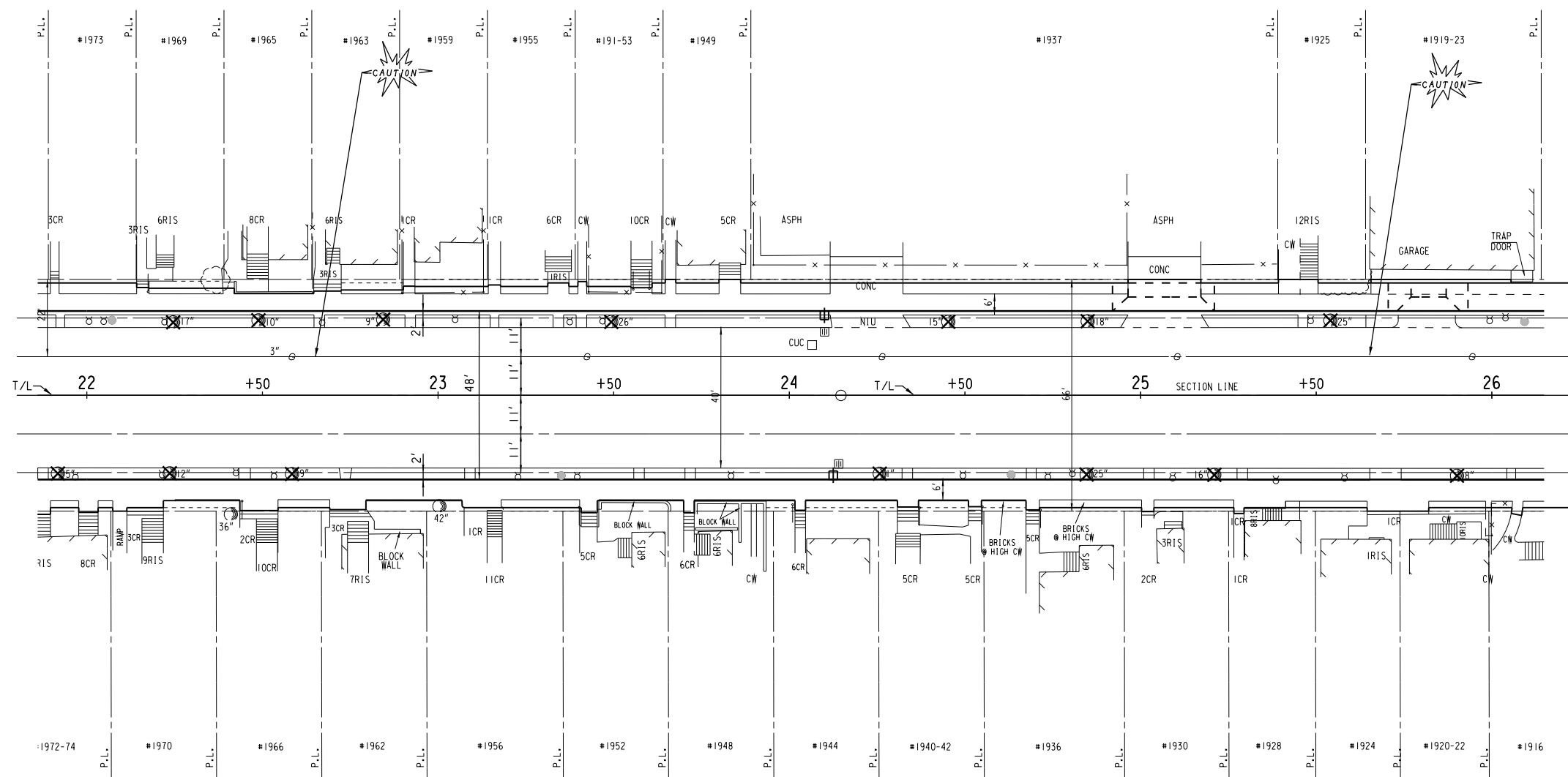
BM: HYD NE CORNER OF
S. 13TH ST. & W. ROGERS ST.
STA. 21+18, 22' RT (NW BOLT)
ELEV. 71.08

SOUTH

13TH

STREET

N

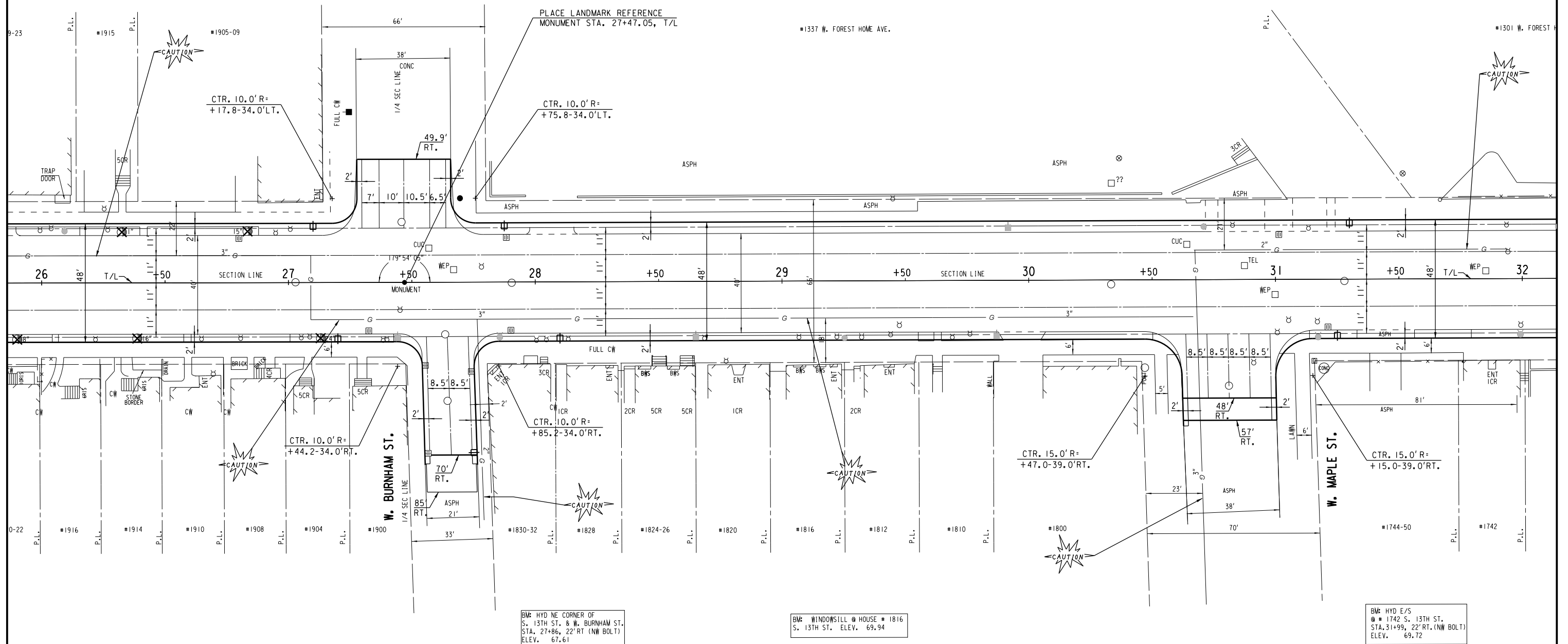


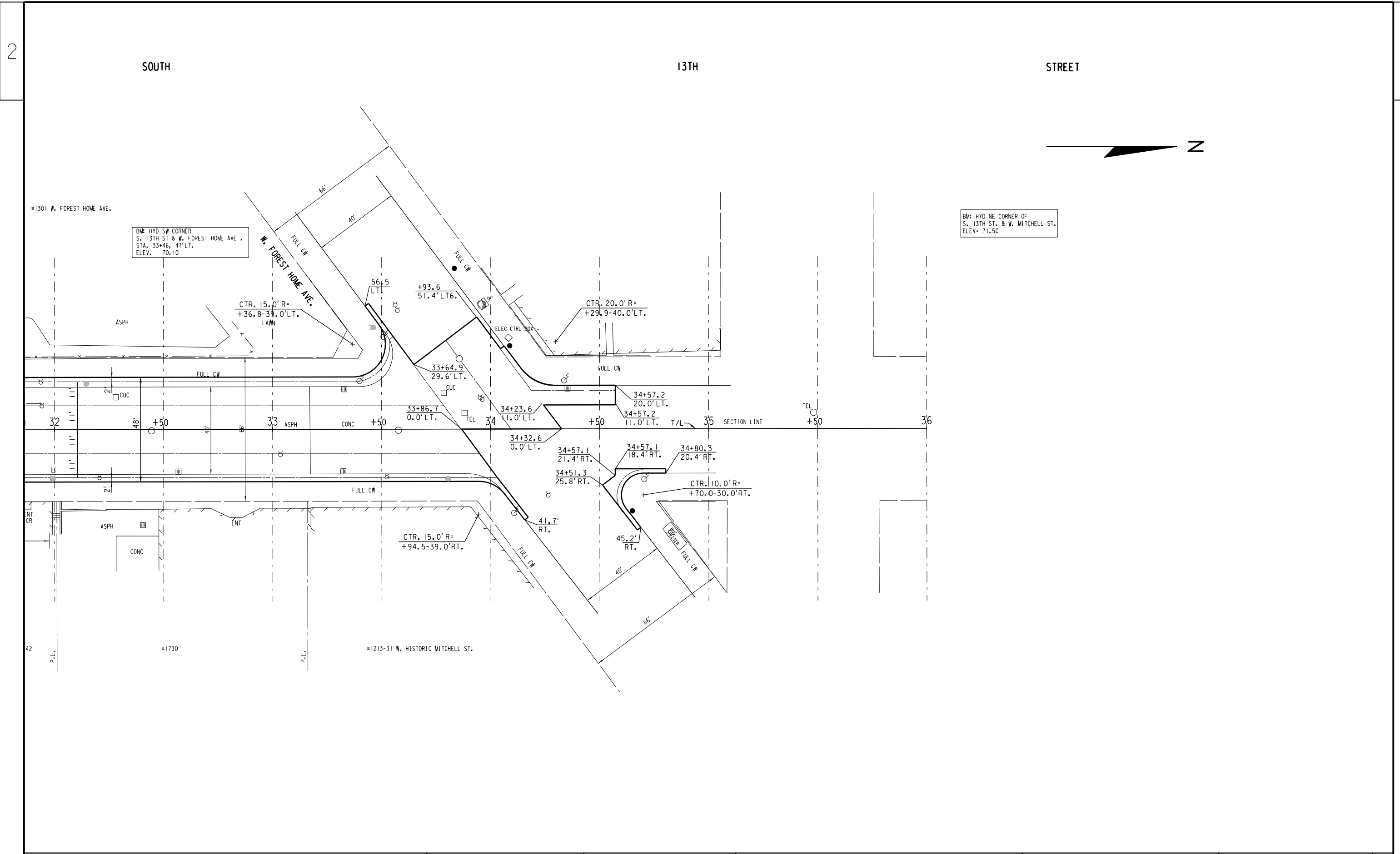
B.M. HYD NE CORNER OF
S. 13TH ST. & W. ROGERS ST.
STA. 21+18, 22' RT (NW BOLT)
ELEV. 71.08

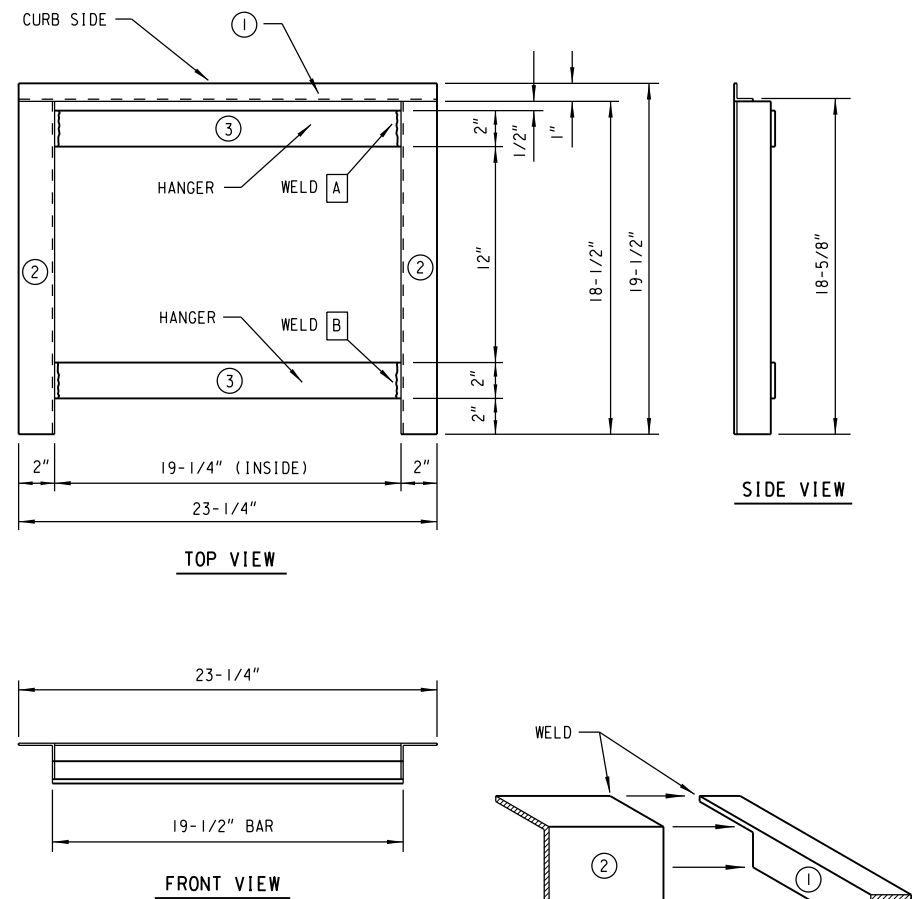
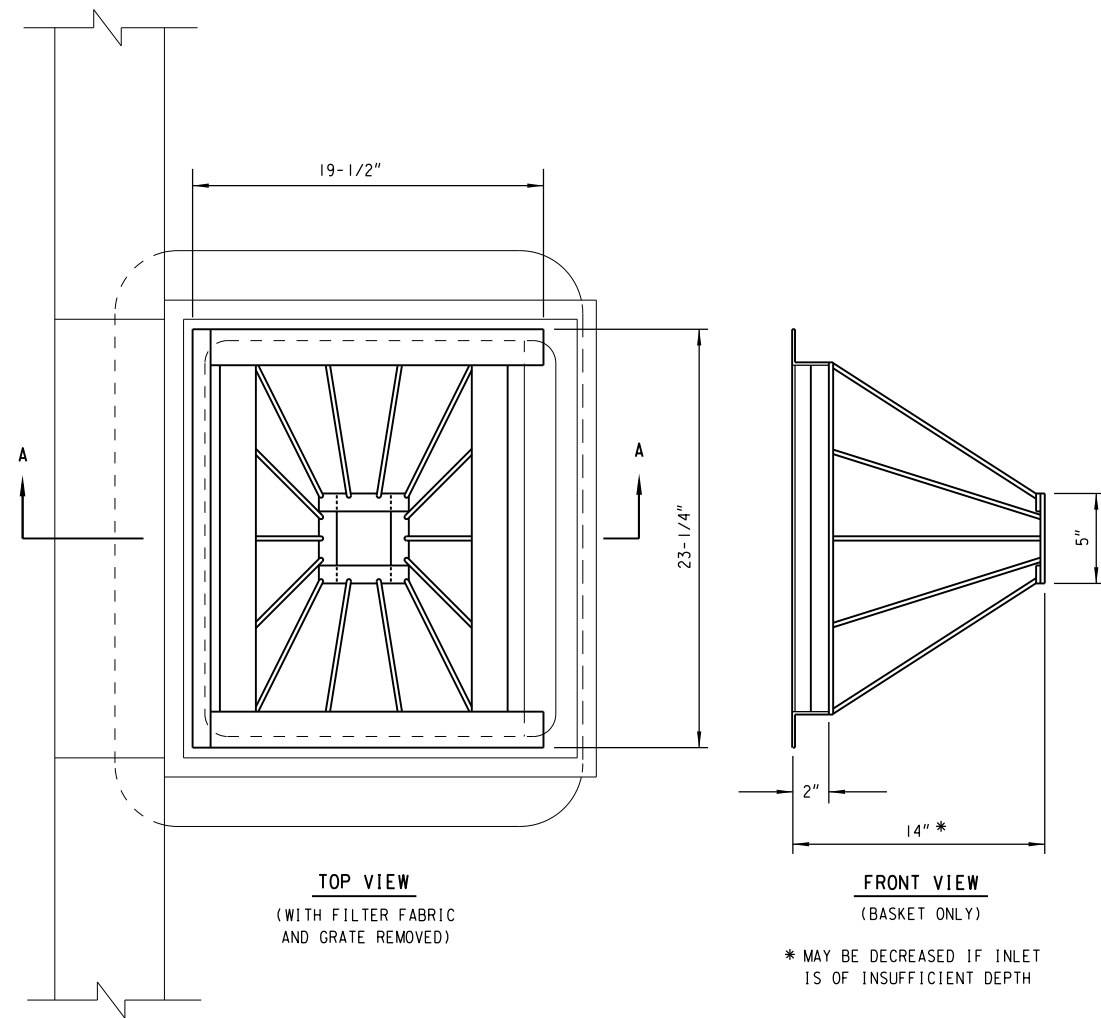
SOUTH

13TH

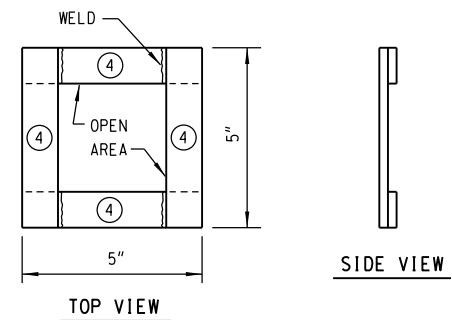
STREET





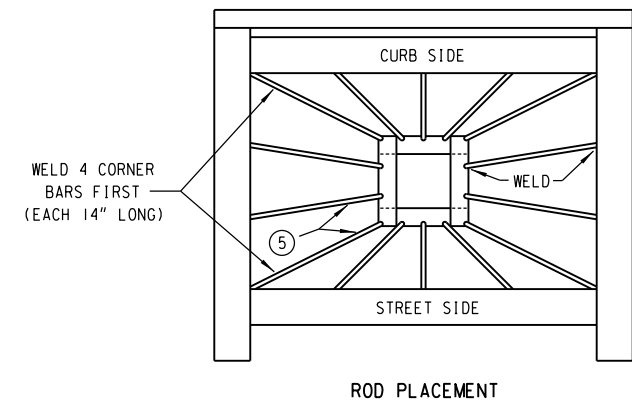
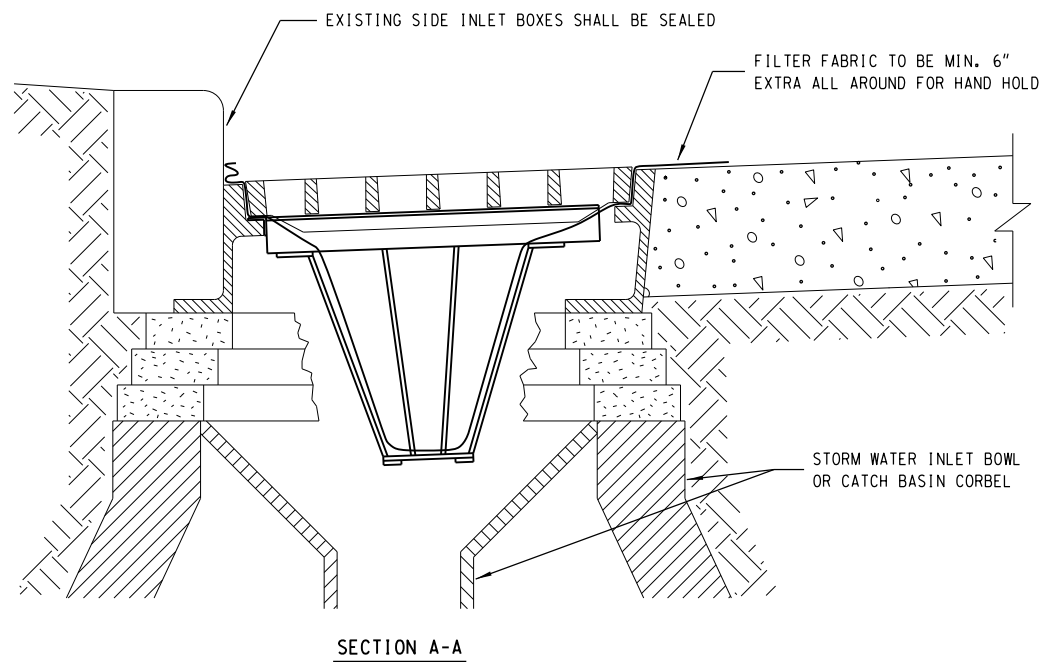


BAR SCHEDULE					
NO.	SHAPE	SIZE	THICKNESS	LENGTH	QUANTITY
①	ANGLE	1" X 1"	1/8"	23-1/4"	1
②	ANGLE	2" X 2"	1/8"	18-1/2"	2
③	BAR	2"	1/4"	19-1/2"	2



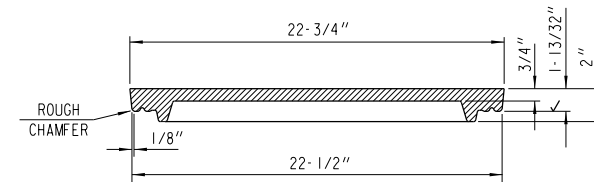
BAR SCHEDULE					
NO.	SHAPE	SIZE	THICKNESS	LENGTH	QUANTITY
④	BAR	1"	1/4"	5"	4

BASKET BOTTOM

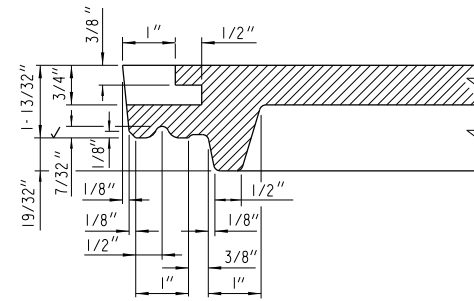


ROD SCHEDULE					
NO.	SHAPE	SIZE	THICKNESS	LENGTH	QUANTITY
⑤	ROD	1/4" MIN.	1/8"	12" TO 14" (CUT TO FIT)	14

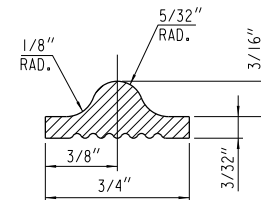
TYPE M
INLET / CATCH BASIN BASKET



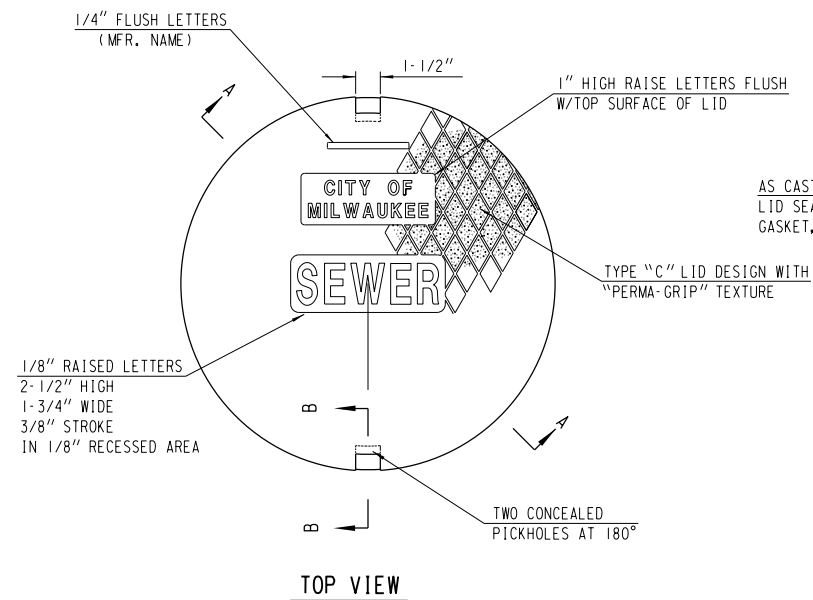
SECTION A-A



SECTION B-B



"T" GASKET DETAIL



TOP VIEW

MANHOLE COVER - TYPE 58-A

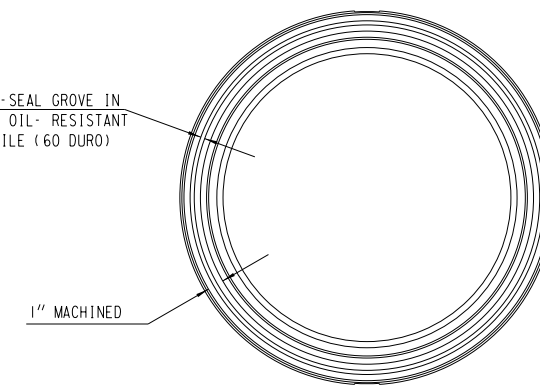
LID - 107 LBS.

NOTE:

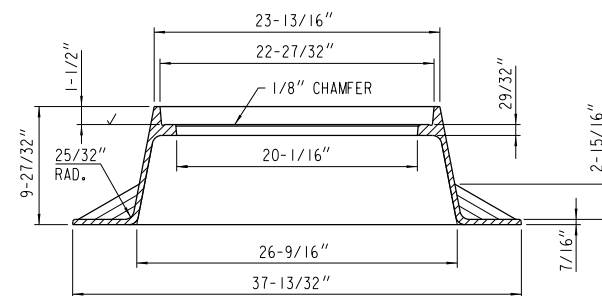
ALL CASTINGS SHALL BEAR THE FOLLOWING IDENTIFICATION MARKS IN THE FORM OF LEGIBLE LETTERS OR NUMERALS RAISED 1/8" HAVING A DIGIT OR LETTER HEIGHT OF ONE INCH ON LOWER FACE OF LID:

1. THE INITIALS OR MONOGRAM OF THE FOUNDRY.
2. THE CONTRACT NUMBER AND YEAR MADE.
3. THE CASTING IDENTIFICATION NUMBER.
4. THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.

NOTE: ALL EXTERIOR EDGES SHALL BE GROUND.

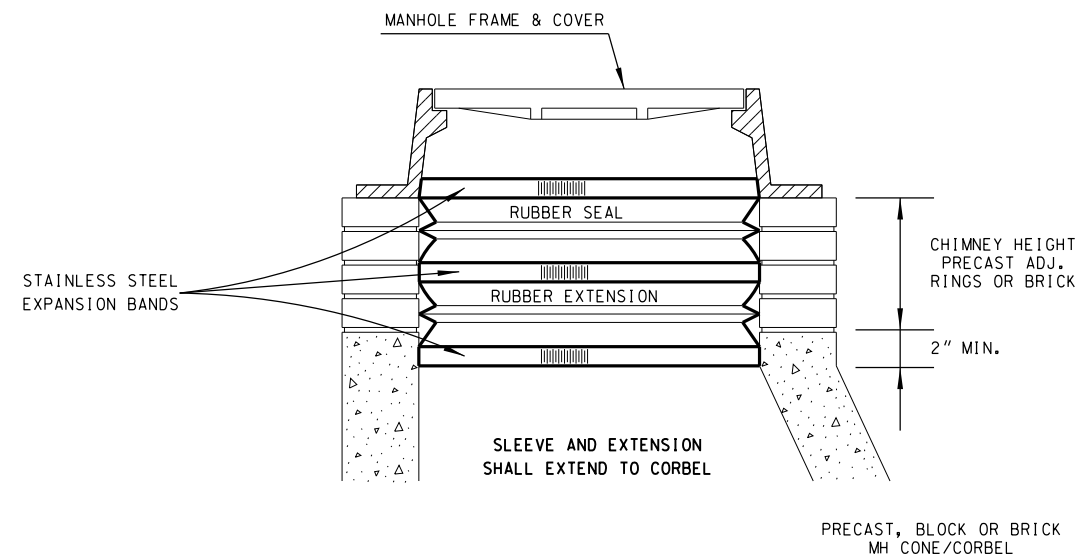


BOTTOM VIEW

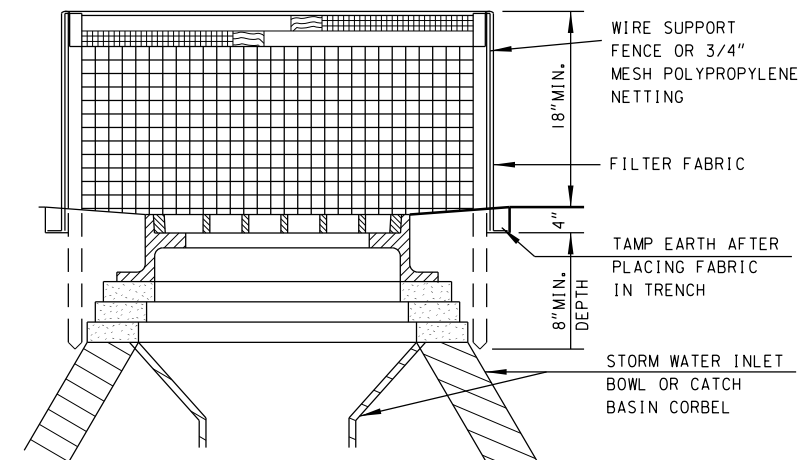
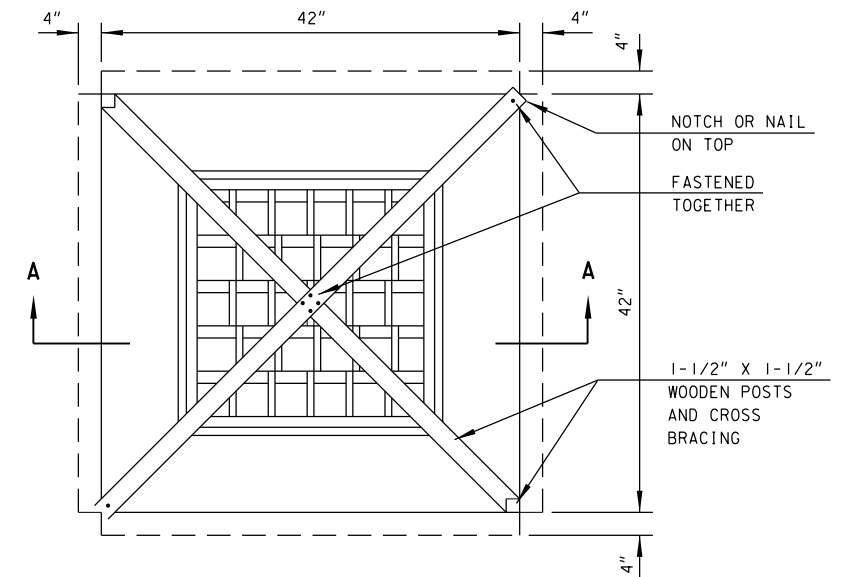


MANHOLE FRAME - TYPE MS21

FRAME - 182 LBS.

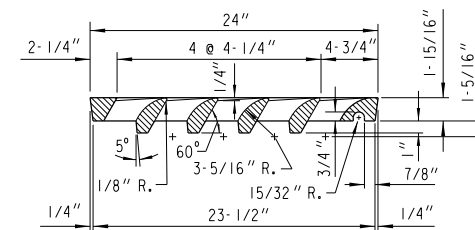


INTERNAL SANITARY MANHOLE SEAL



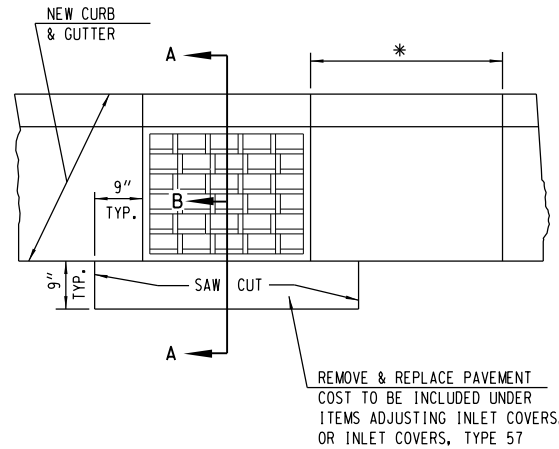
SECTION A-A

INLET SCREEN
(NOT PAVED) (TYPE R)

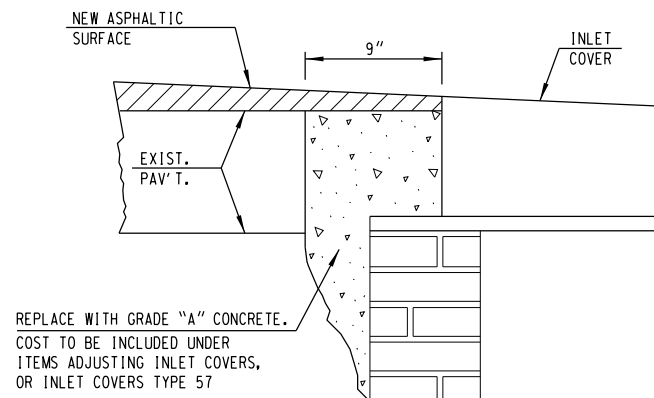


LID-145 LBS., FRAME-204 LBS.

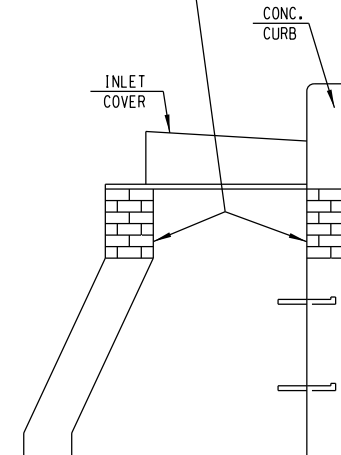
* REMOVE 3'-0" CURB & GUTTER MIN. OR TO THE NEAREST JOINT, 6'-0" MAX. UNLESS OTHERWISE DIRECTED ON THE PLAN.



PLAN VIEW



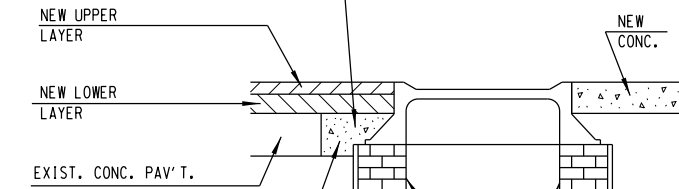
SECTION A-B



SECTION A-A

ADJUSTING INLET COVERS

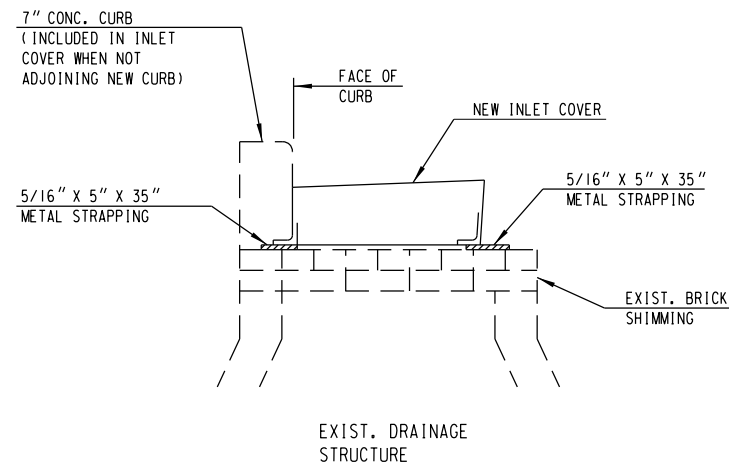
REPLACE WITH CONCRETE
COST TO BE INCLUDED UNDER ITEMS
ADJUSTING MANHOLE COVERS, OR
MANHOLE COVERS TYPE 58 OR TYPE 58A



PAVEMENT REMOVAL COST
TO BE INCLUDED UNDER ITEMS
ADJUSTING MANHOLE COVERS
OR MANHOLE COVERS TYPE 58
OR TYPE 58A

REPAIR BY REMOVING & REPLACING DAMAGED OR LOOSE BRICK OR BLOCK TO DEPTH AS DIRECTED BY ENGINEER. WORK UNDER ADJUSTING MANHOLE COVERS SHALL BE CONFINED TO THE BRICK SHIMMING ABOVE THE STRUCTURE CORBEL. THIS SHIMMING SHALL NOT EXCEED 1 FOOT BETWEEN THE TOP OF THE CORBEL AND THE FRAME BOTTOM. ANY WORK MORE EXTENSIVE THAN DESCRIBED IMMEDIATELY ABOVE SHALL BE CONSTRUED AS WORK UNDER RECONSTRUCTING MANHOLES. DEPTHS OF BRICKWORK TO BE REPAIRED, AS INDICATED ON THE PLAN, ARE ESTIMATES ONLY AND MAY VARY AT TIME OF CONSTRUCTION.

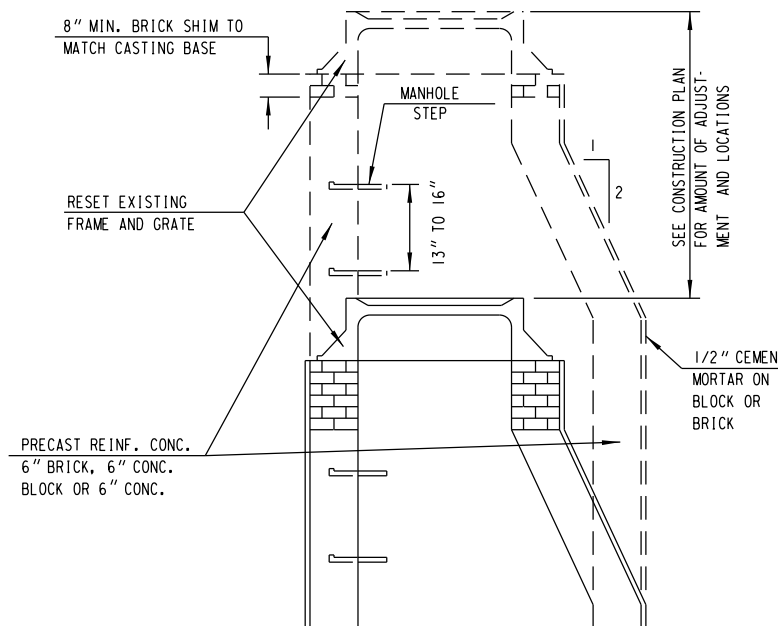
ADJUSTING MANHOLE COVERS OR
MANHOLE COVERS TYPE 58 OR TYPE 58A



NOTES:

1. METAL STRAPPING TO BE 5/16" X 5" X 35" FLAT STEEL, HOT ROLLED (ASTM A36).
2. METAL STRAPPING TO BE PLACED ACROSS EXISTING DRAINAGE STRUCTURE TO SUPPORT NEW COVER. THE METAL STRAPPING SHALL BE SET ON A BED OF MORTAR.
3. PRECAST CONCRETE FLAT SLAB TOPS MAY BE USED ON THE STRUCTURE. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.
4. COST OF MATERIALS AND LABOR TO BE INCLUDED IN PRICE BID FOR INLET COVER, TYPE 57.

DETAIL FOR PLACING NEW INLET COVER ON EXISTING
INLET USING METAL STRAPPING MATERIALS



CORBEL MAY BE REVERSED
STRAIGHT SIDE LEANED
SLIGHTLY TO CLEAR CURB HEAD.

REPAIR BY REMOVING AND REPLACING DAMAGED OR LOOSE BRICK OR BLOCK TO THE DEPTH AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER. DEPTHS AS INDICATED ON PLAN ARE ESTIMATES ONLY AND MAY VARY AT TIME OF CONSTRUCTION.

RECONSTRUCTING MANHOLES
AND INLETS

CONSTRUCTION NOTES

1. LOCATIONS OF STRUCTURES IN CURB & GUTTER SECTIONS REFER TO FACE OF CURB.
2. LOCATIONS OF STRUCTURES NOT IN CURB AND GUTTER SECTIONS REFER TO CENTERLINE OF STRUCTURE.
3. PIPE LENGTHS GIVEN ARE APPROXIMATE OUT TO OUT OF STRUCTURE.
4. GRATE & RIM ELEVATIONS ARE GIVEN AT FLOW LINE OF INLET COVER OR AT CENTERLINE OF MANHOLE COVER.
5. WHEN NEW COVERS ARE PLACED, THE FIRST 12" OF ADJUSTMENT OR REPAIRING SHALL BE INCLUDED IN THE COST OF THE NEW COVER. ANY ADJUSTMENT OR REPAIR OF BRICKWORK 12" OR LESS WILL BE PAID AS ADJUSTING COVERS WHEN RESETTNG EXISTING COVERS, ANY ADJUSTMENT OR REPAIR OF BRICKWORK MORE THAN 12" WILL BE PAID AS A RECONSTRUCT.
6. MANHOLE ADJUSTMENTS IN ASPHALTIC PAVEMENT WILL BE MADE AFTER THE LOWER LAYER IS PLACED.
7. WHEN CONSTRUCTING CONCRETE CURB ADJACENT TO INLET COVER TYPE 57, TWO (2) DEFORMED TIE BARS SHALL BE PLACED LONGITUDINALLY THROUGH THE CURB SECTION AND EXTENDED ONE (1) FOOT BEYOND EACH SIDE OF THE FRAME. A DUMMY JOINT SHALL BE CUT IN THE CURB AT EACH SIDE OF THE FRAME.

PLAN

PLAN

PLAN

TOP SLAB - TYPE A

PLAN

RECTANGULAR ADJUSTING RING - TYPE A

SECTION A-A

CATCH BASIN - TYPE 44A

GENERAL NOTES

SECTION A-A

PLAN

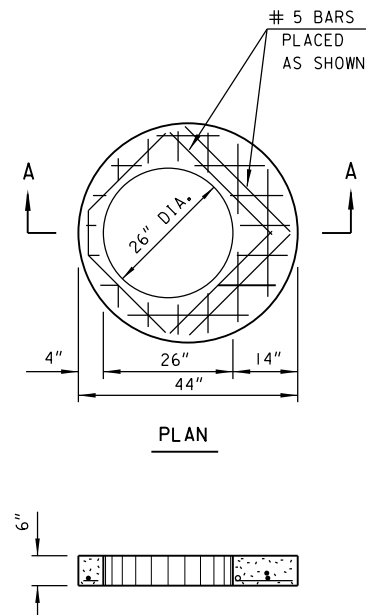
TRAP ASSEMBLY

SECTION B-B

PLAN

SECTION A-A

BASE - TYPE A



SECTION A-A

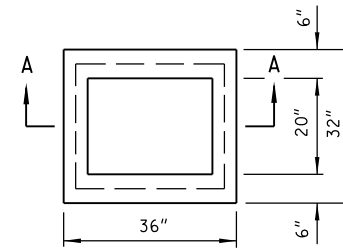
TOP SLAB - TYPE A

FLAT TOP SLAB SHALL BE 6" THICK REINFORCED WITH ONE LAYER OF STEEL WITH A MINIMUM AREA OF 0.32 SQ. IN. PER LINEAL FOOT IN BOTH DIRECTIONS, PLACED NEAR THE BOTTOM OF THE SLAB WITH 1" CLEAR COVER.

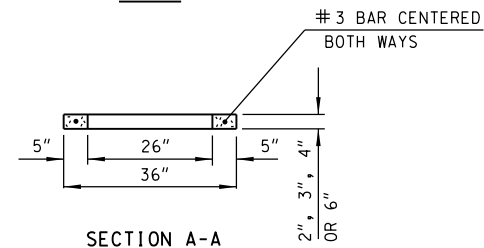
ADDITIONALLY, NO. 5 BARS SHALL BE PLACED AROUND TOP SLAB OPENING AS SHOWN.

REINFORCEMENT SHALL BE TIED OR WELDED TOGETHER.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 4000 P.S.I.



PLAN

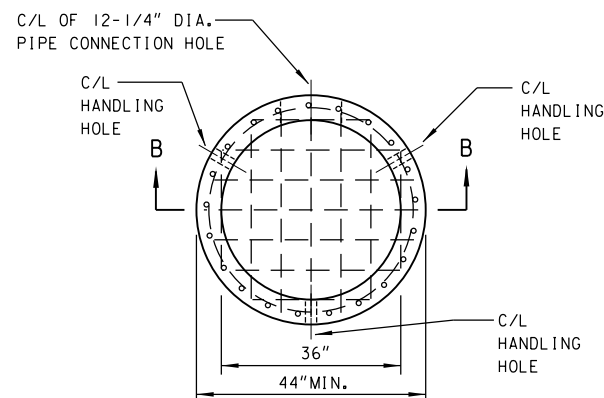


SECTION A-A

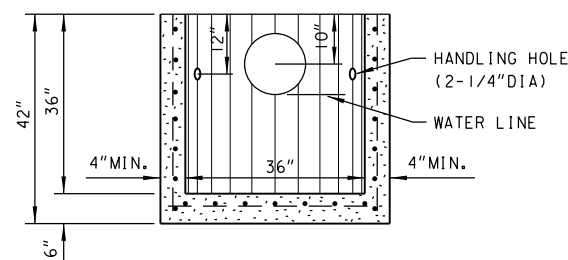
RECTANGULAR ADJUSTING RING - TYPE A

THE ADJUSTING RINGS SHALL BE 2", 3", 4" OR 6" IN HEIGHT.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 3300 P.S.I.



RISER SECTION WITH INTEGRAL BASE PLAN



SECTION B-B

CIRCUMFERENTIAL AND LONGITUDINAL REINFORCEMENT IN THE RISER SECTION SHALL EACH CONSIST OF ONE LAYER OF STEEL NOT LESS THAN 0.12 SQ. IN. PER FOOT AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.

THE BASE SLAB SHALL BE REINFORCED WITH ONE LAYER OF STEEL WITH A MINIMUM AREA OF 0.32 SQ. IN. PER FOOT IN BOTH DIRECTIONS, PLACED ABOVE THE MIDPOINT OF THE SLAB.

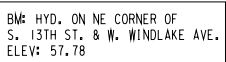
RISER SECTION AND BASE SLAB REINFORCEMENT SHALL BE TIED OR WELDED TOGETHER.

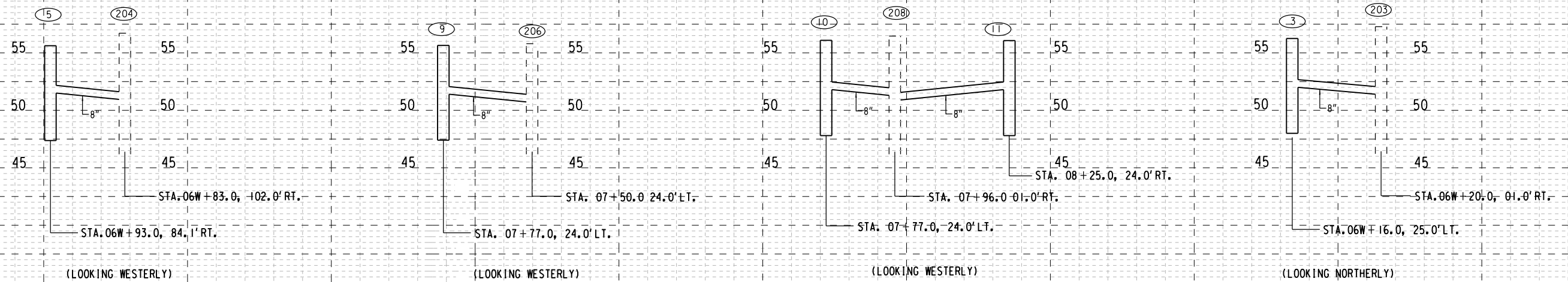
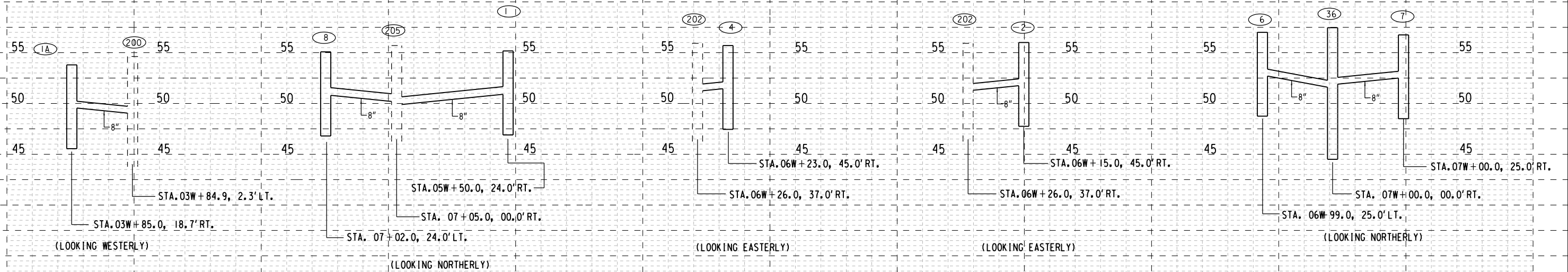
TWO TO THREE HANDLING HOLES 2-1/4" IN DIAMETER AND A PIPE CONNECTION HOLE 12-1/4" IN DIAMETER SHALL BE CAST OR CORED IN THE RISER SECTION AT THE LOCATIONS SHOWN. LIFTING DEVICES MAY BE SUBSTITUTED FOR HANDLING HOLES.

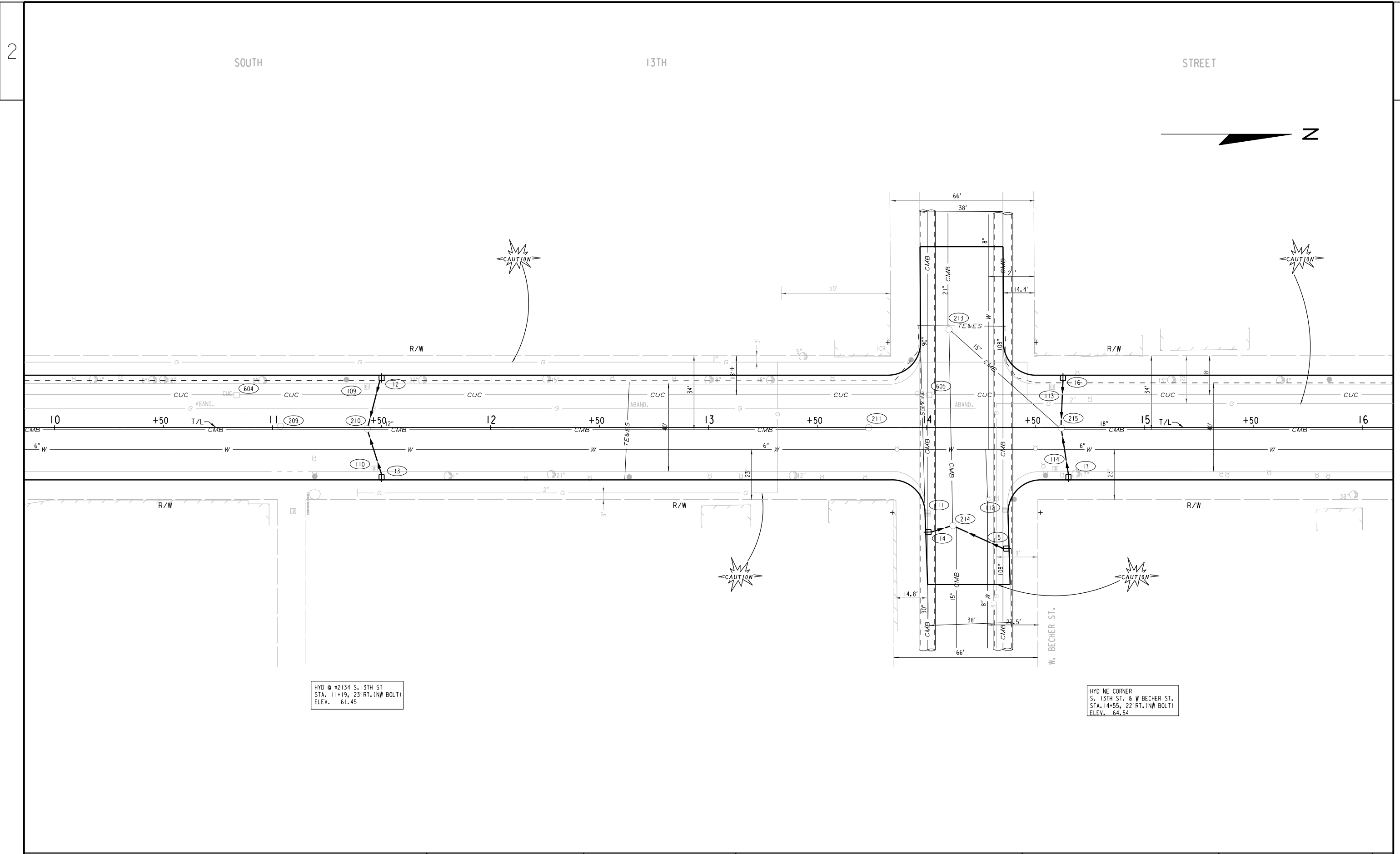
NO JOINTS OR HOLES SHALL BE BELOW THE WATERLINE.

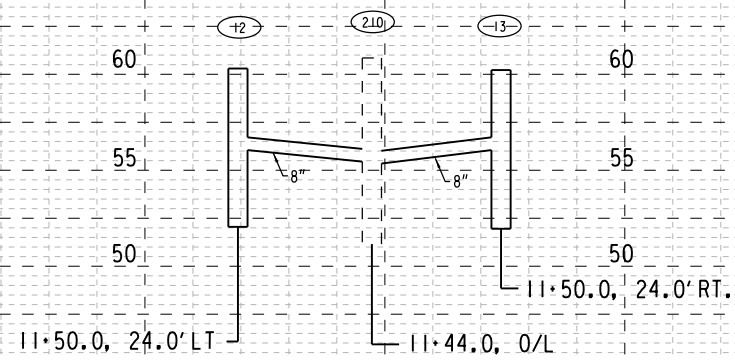
THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 4000 P.S.I.

RISER SECTION MAY TAPER TO A 33" INTERNAL DIAMETER AT IT'S BOTTOM PROVIDED A 44" MINIMUM OUTSIDE DIAMETER IS MAINTAINED.

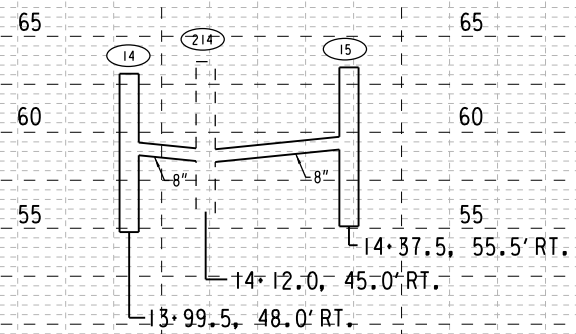




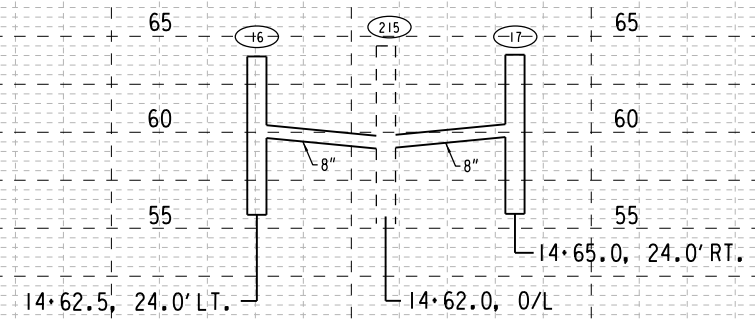




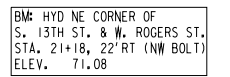
(S. 13TH ST. LOOKING NORTH)

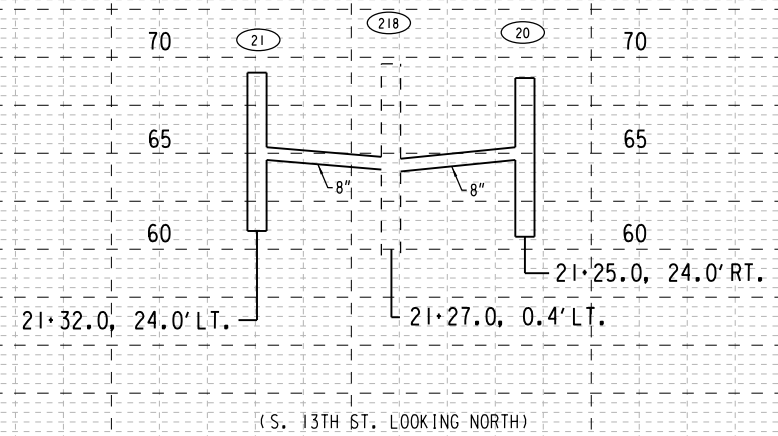
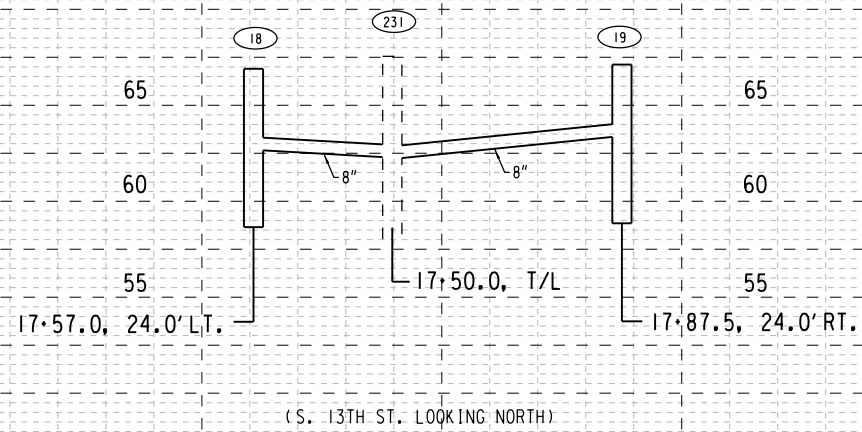


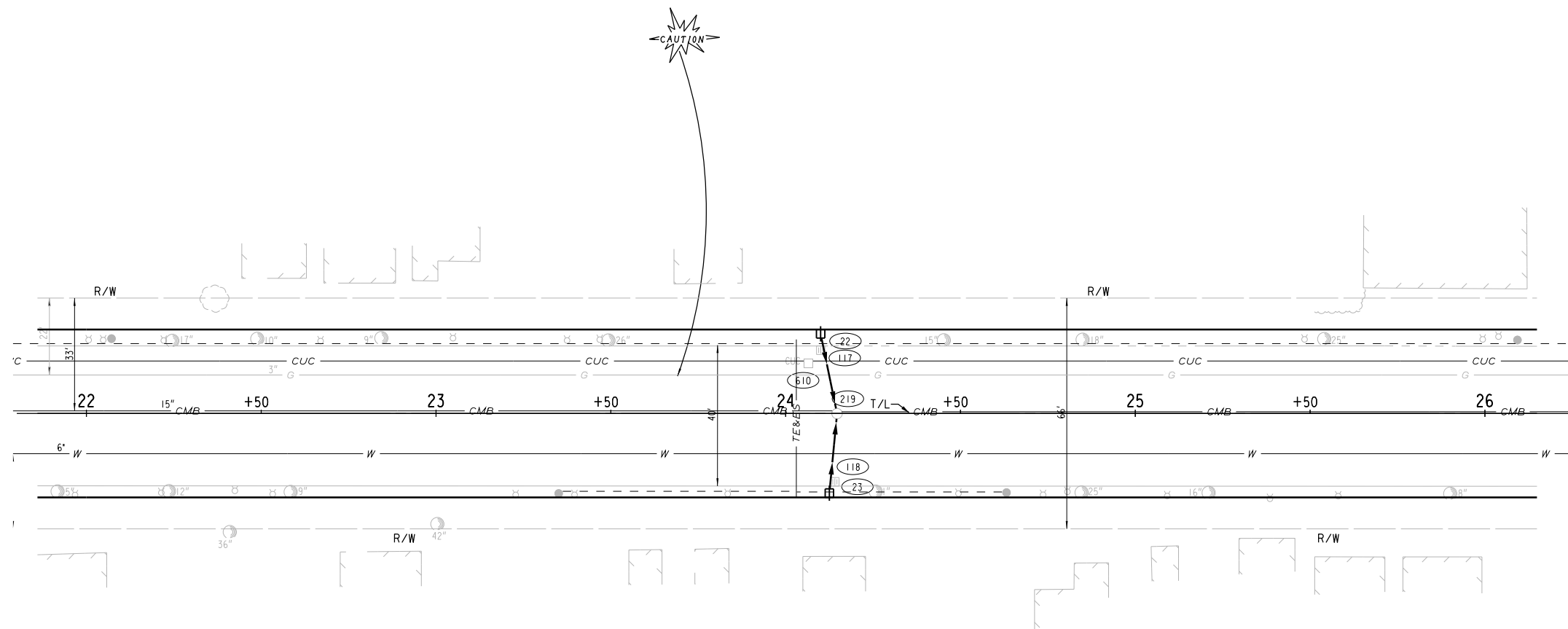
(W. BECHER ST. LOOKING WEST)



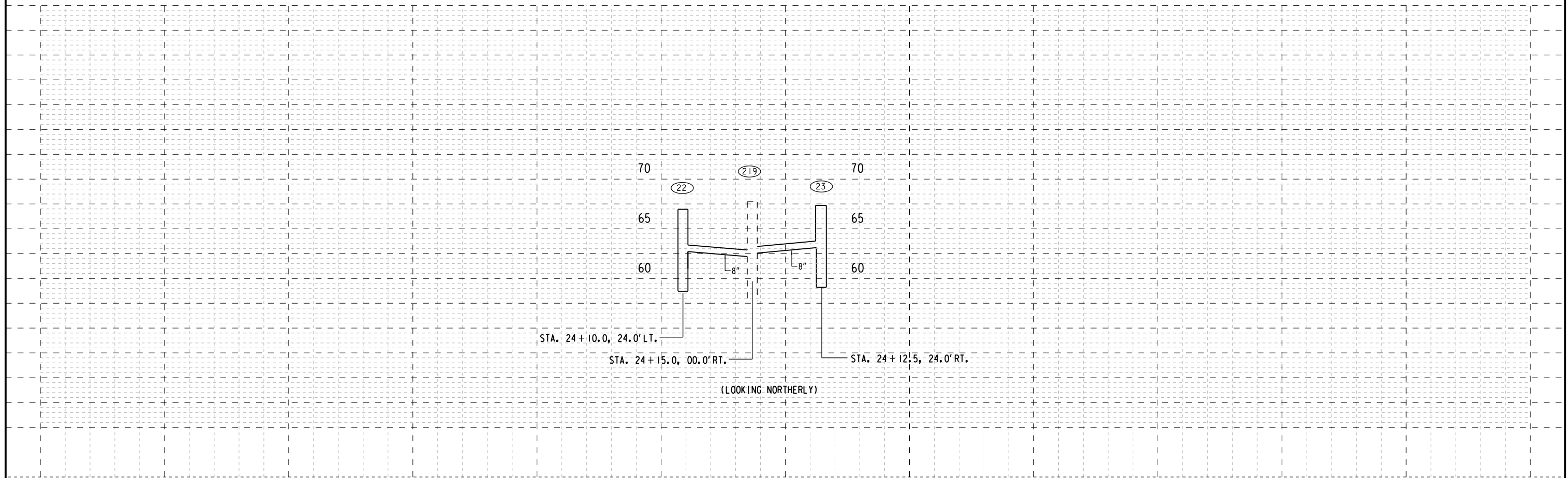
(S. 13TH ST. LOOKING NORTH)

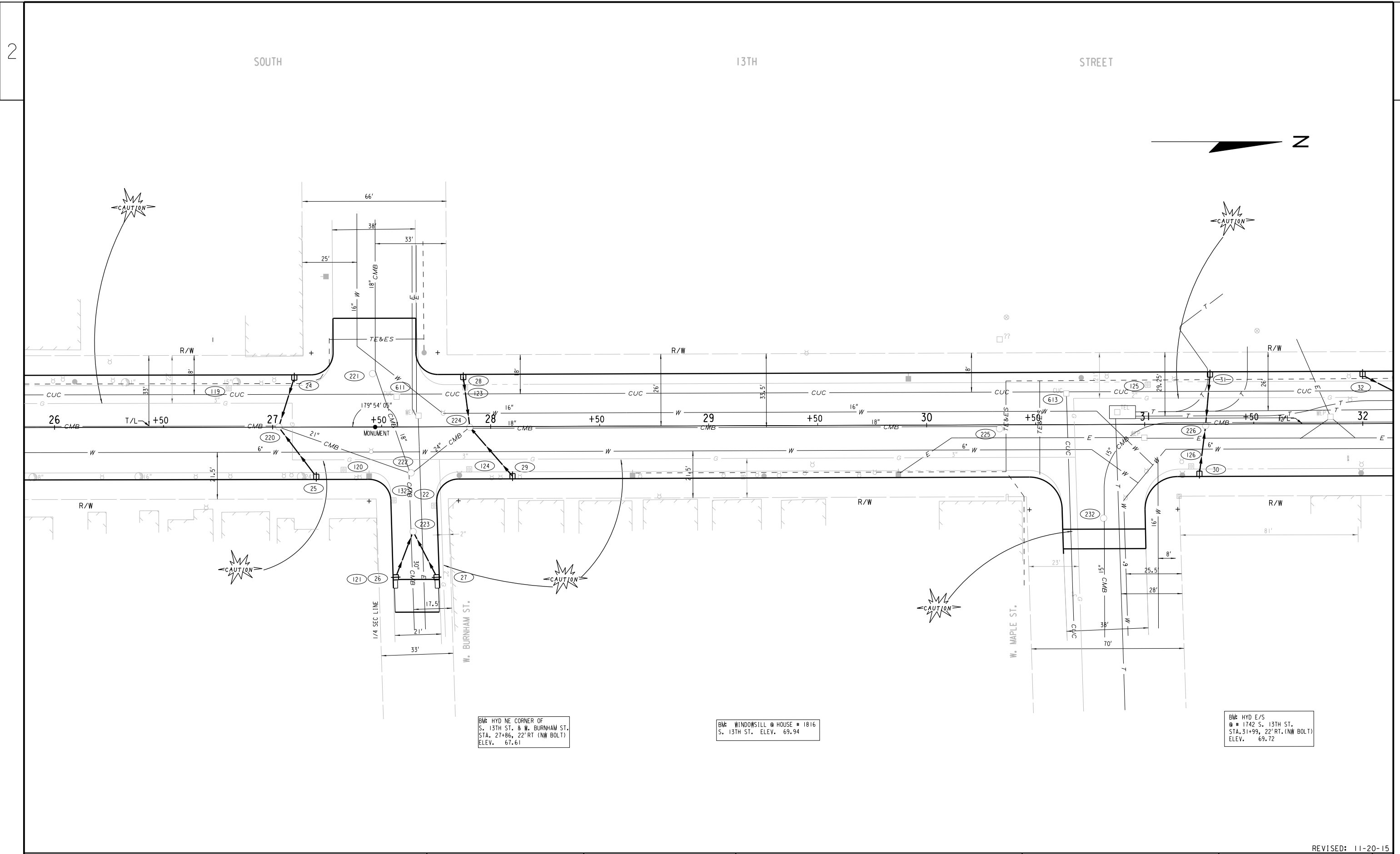


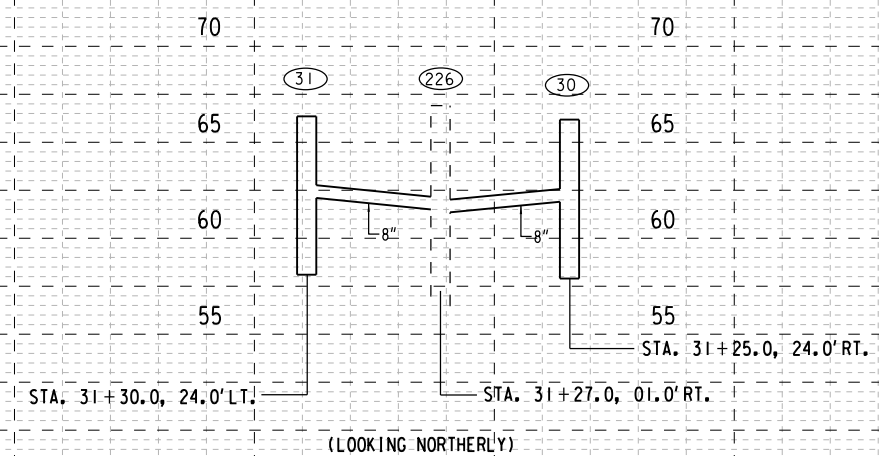
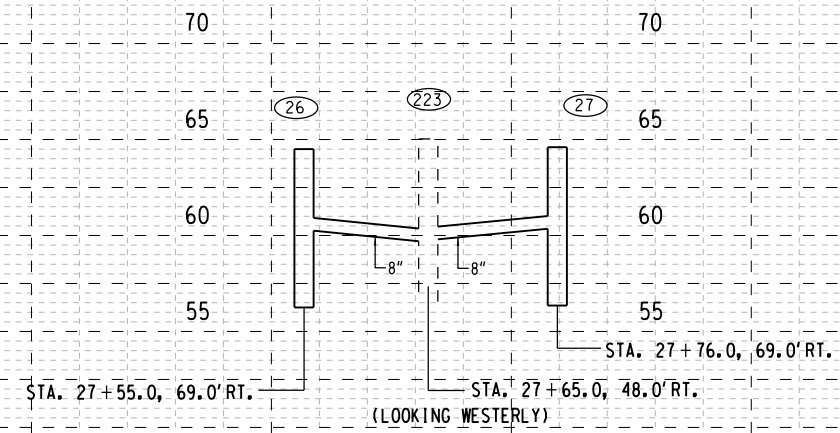




BM: HYD NE CORNER OF
S. 13TH ST. & W. ROGERS ST.
STA. 21+18, 22' RT (NW BOLT)
ELEV. 71.08







SOUTH

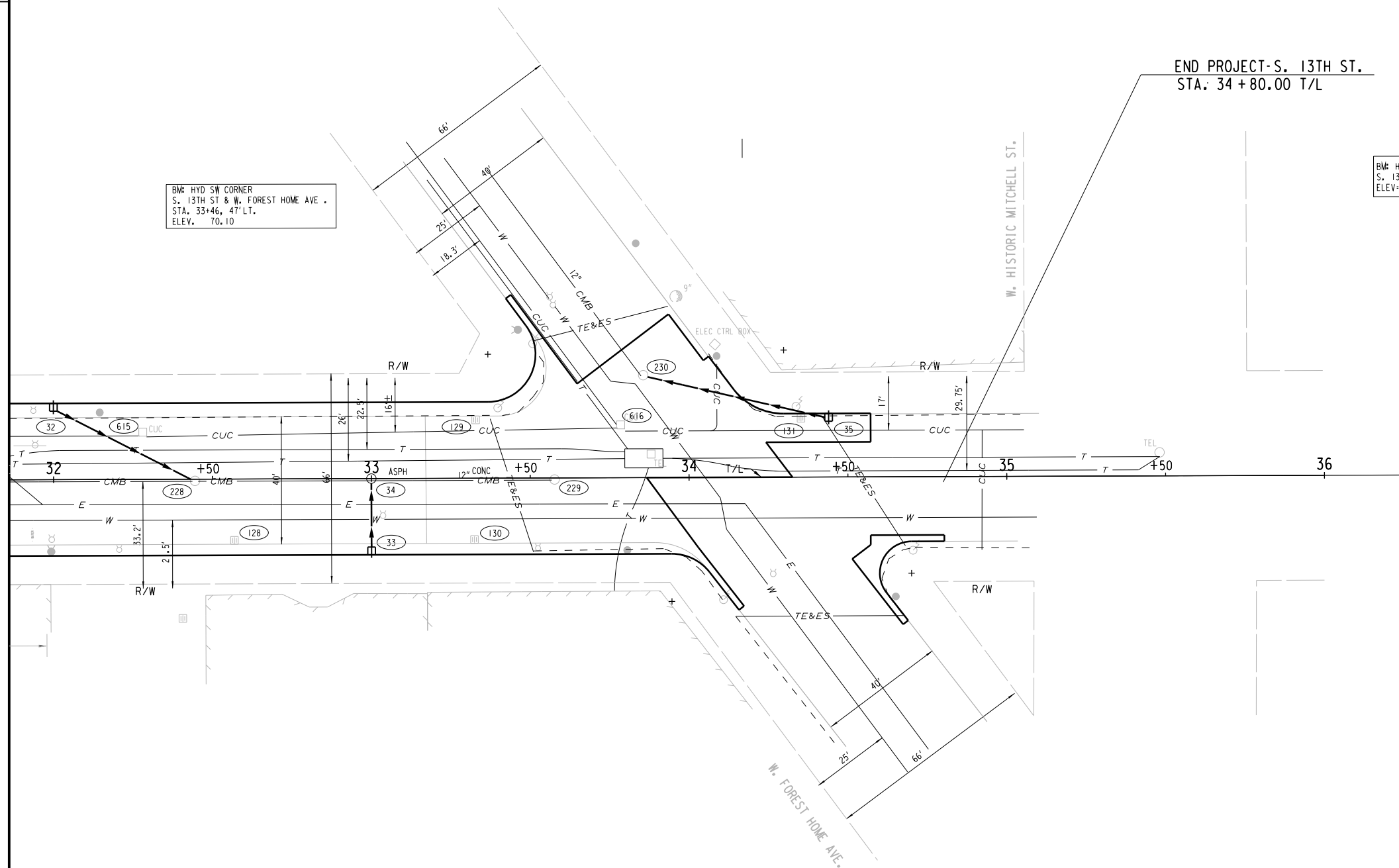
13TH

STREET

END PROJECT-S. 13TH ST.
STA. 34 + 80.00 T/L

BM: HYD NE CORNER OF
S. 13TH ST. & W. MITCHELL ST.
ELEV: 71.50

BM: HYD SW CORNER
S. 13TH ST & W. FOREST HOME AVE.
STA. 33+46, 47' LT.
ELEV. 70.10



70

65

60

55

32

32+00, 24.0' LT.

(S. 13TH ST. LOOKING NORTH)

228

32+44.5, 0.5' RT.

70

65

60

55

70

65

60

55

34

33+00.0, 0/L

(S. 13TH ST. LOOKING NORTH)

33

33+00.0, 24.0' LT.

70

65

60

55

70

65

60

55

230

33+85.6, 32.3' LT.

(S. 13TH ST. LOOKING NORTH)

35

34+44.0, 20' LT.

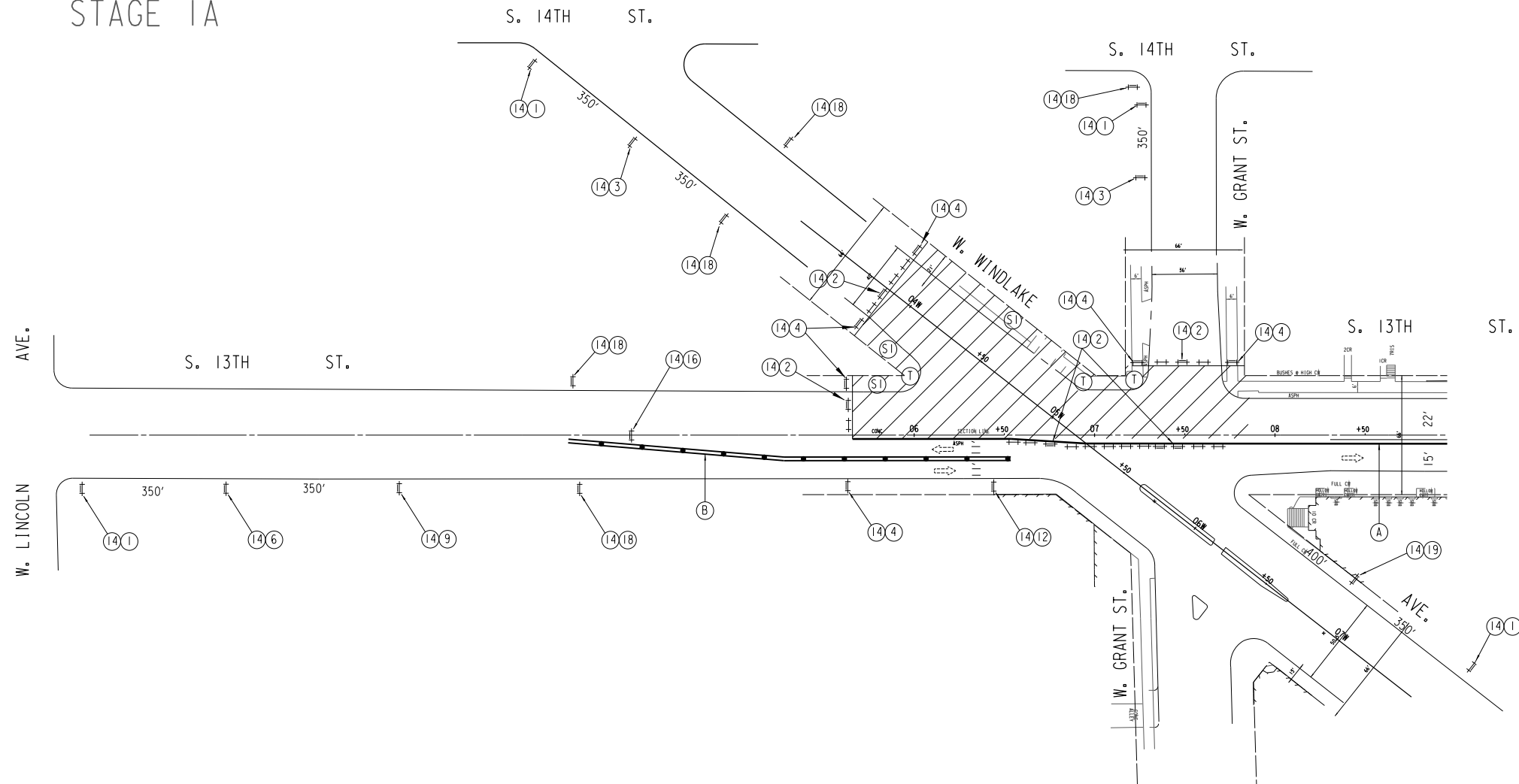
70

65

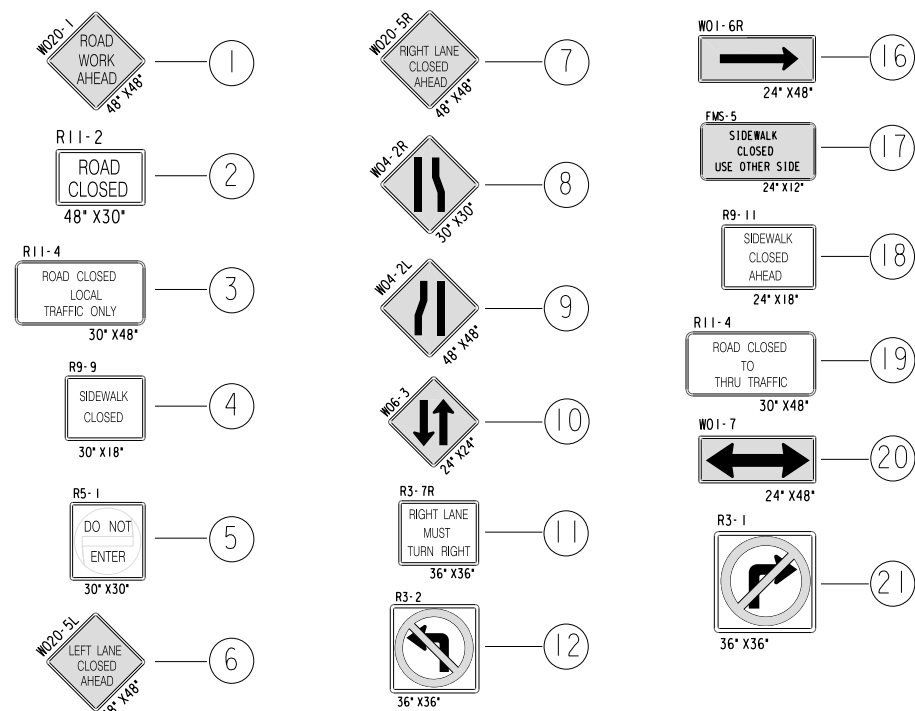
60

55

STAGE 1A



LEGEND



- (A) TPM PAINT, 4" YELLOW
(B) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(S1) TEMPORARY PEDESTRIAN SURFACE ASPHALT
(S2) TEMPORARY PEDESTRIAN SURFACE PLYWOOD
(S3) TEMPORARY PEDESTRIAN SURFACE PLATE
(T) TEMPORARY CURB RAMP

- DRUMS W/LIGHTS 30' SPACING ● —
TYPE III BARRICADES ++ (14)
TYPE III BARRICADES W/ SIGN ++ (14) + (X)

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
ALL SIGNS SHALL BE Banded TO EXISTING UTILITY POLES
UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING
PAVEMENT MARKINGS.

- SIGNS Banded TO UTILITY POLE ○ |
WORK AREA ▨
DIRECTION OF TRAFFIC →
TUBULAR MARKERS 25' SPACING ●

SHEET 1 OF 13

STATE PROJECT NUMBER 2505-00-75

- -

HWY: LOCAL STREET

COUNTY: MILWAUKEE

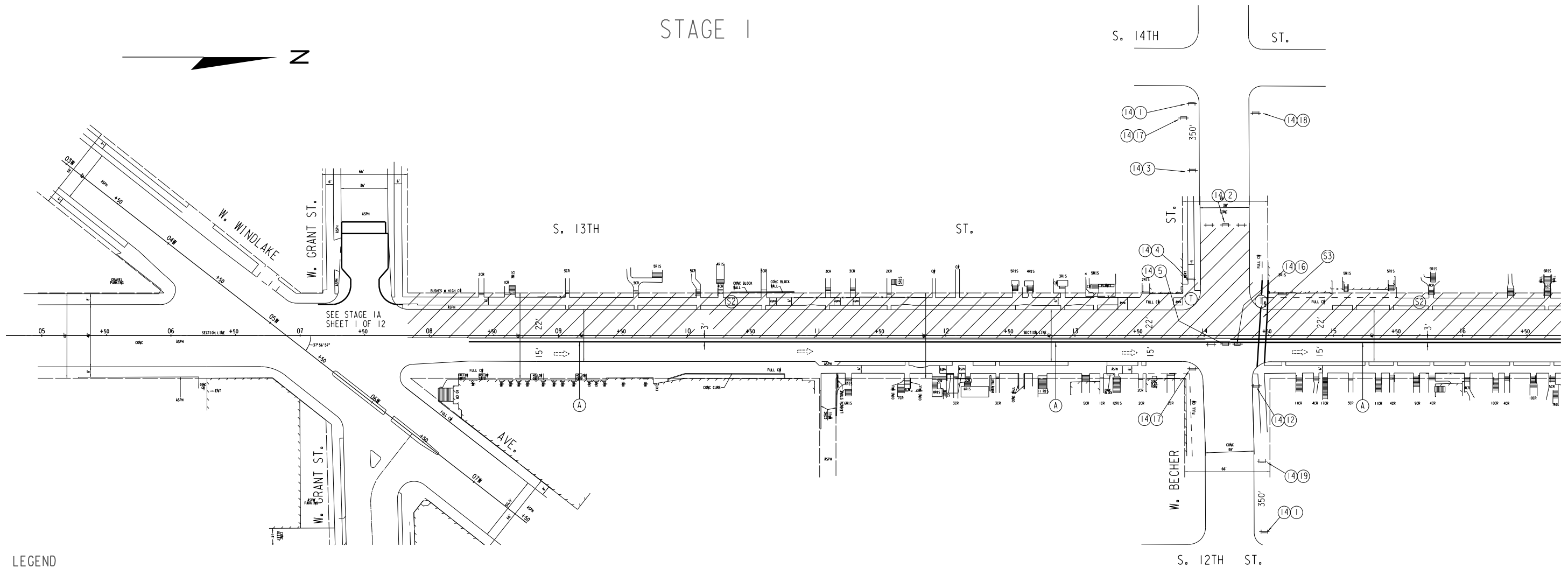
TRAFFIC CONTROL

SCALE FEET 0' 80'

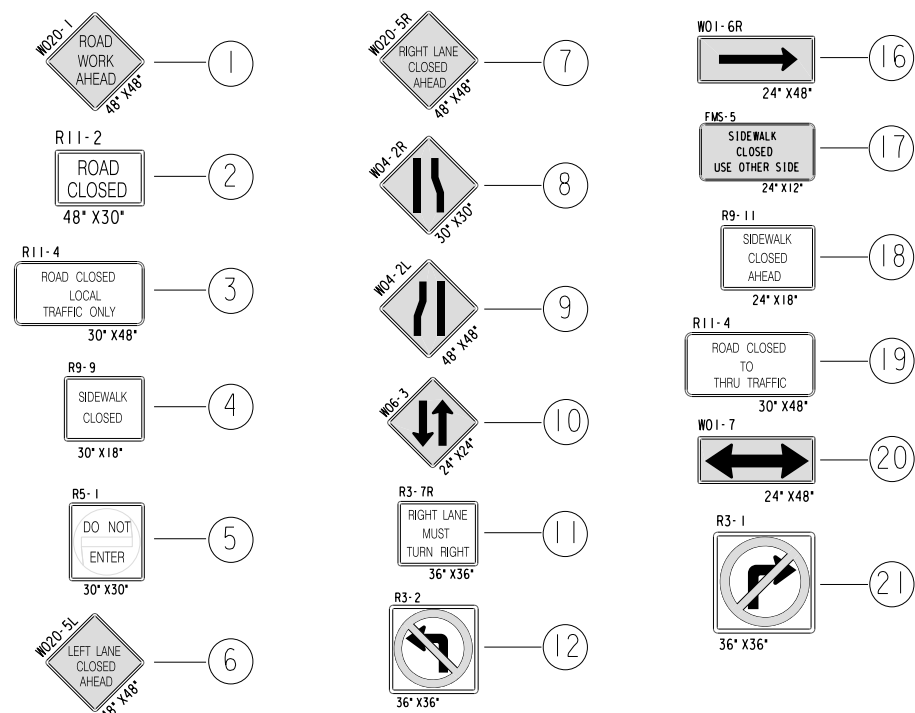
SHEET NO: 55

E

STAGE I



LEGEND



- (A) TPM PAINT, 4" YELLOW
- (B) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (S1) TEMPORARY PEDESTRIAN SURFACE ASPHALT
- (S2) TEMPORARY PEDESTRIAN SURFACE PLYWOOD
- (S3) TEMPORARY PEDESTRIAN SURFACE PLATE
- (T) TEMPORARY CURB RAMP

- DRUMS W/LIGHTS 30' SPACING
- TYPE III BARRICADES ++ (14)
- TYPE III BARRICADES W/ SIGN (14) + (X)

- SIGNS BANDED TO UTILITY POLE
- WORK AREA
- DIRECTION OF TRAFFIC
- TUBULAR MARKERS 25' SPACING

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED. CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

SHEET 2 OF 13

STATE PROJECT NUMBER 2505-00-75

- -

HWY: LOCAL STREET

COUNTY: MILWAUKEE

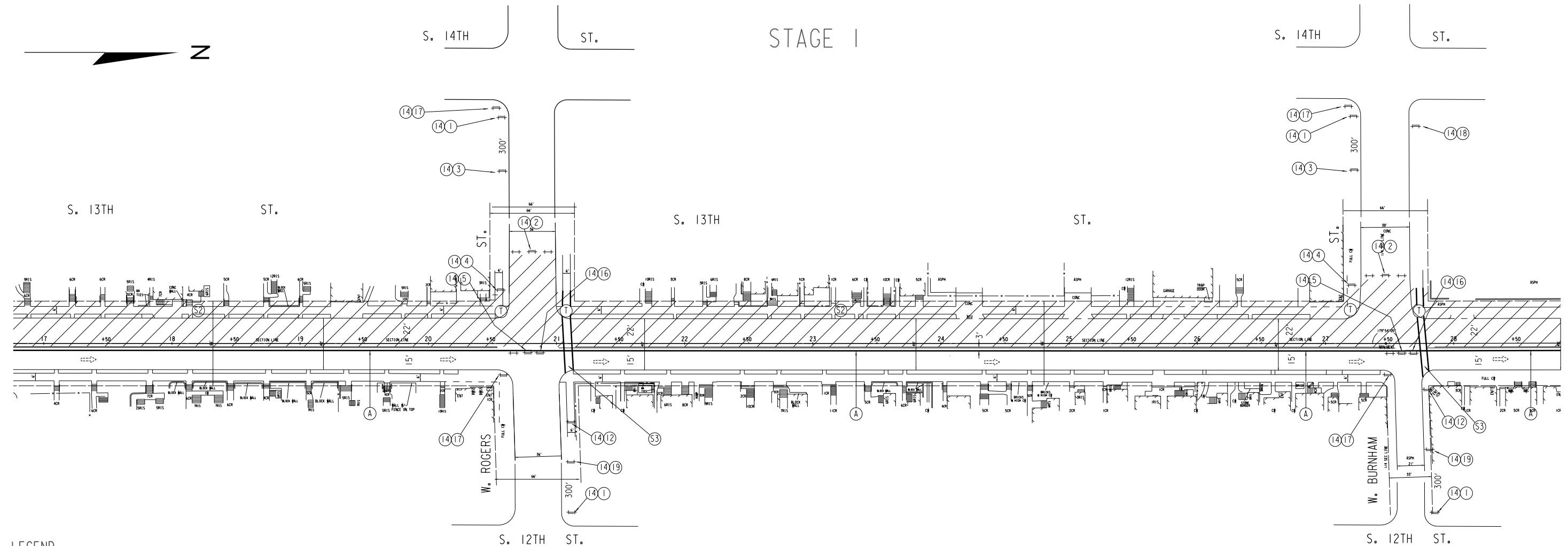
TRAFFIC CONTROL

SCALE FEET 0'

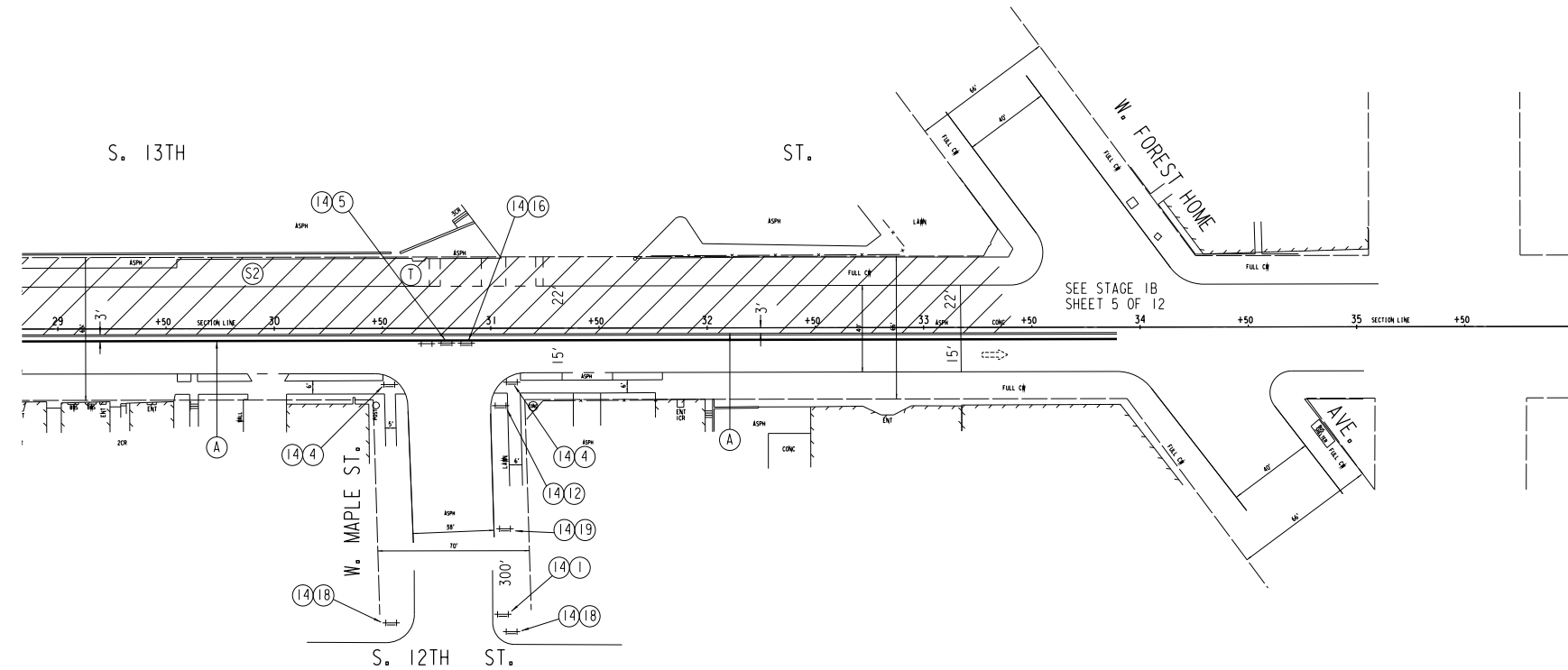
80'

SHEET NO: 56

E



STAGE I



LEGEND

	1		7		16	(A) TPM PAINT, 4" YELLOW (B) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW (C) TPM, REMOVABLE TAPE, 4" WHITE (S1) TEMPORARY PEDESTRIAN SURFACE ASPHALT (S2) TEMPORARY PEDESTRIAN SURFACE PLYWOOD (S3) TEMPORARY PEDESTRIAN SURFACE PLATE (T) TEMPORARY CURB RAMP DRUMS W/LIGHTS 30' SPACING ● — TYPE III BARRICADES ++ — (14) TYPE III BARRICADES W/ SIGN ⇄ — (14) + (X)
	2		8		17	
	3		9		18	SIGNS Banded TO UTILITY POLE ○ WORK AREA ▨ DIRECTION OF TRAFFIC ● TUBULAR MARKERS 25' SPACING ●
	4		10		19	
	5		11		20	NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE Banded TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED. CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.
	6		12		21	

SHEET 4 OF 13

STATE PROJECT NUMBER 2505-00-75

- -

HWY: LOCAL STREET

COUNTY: MILWAUKEE

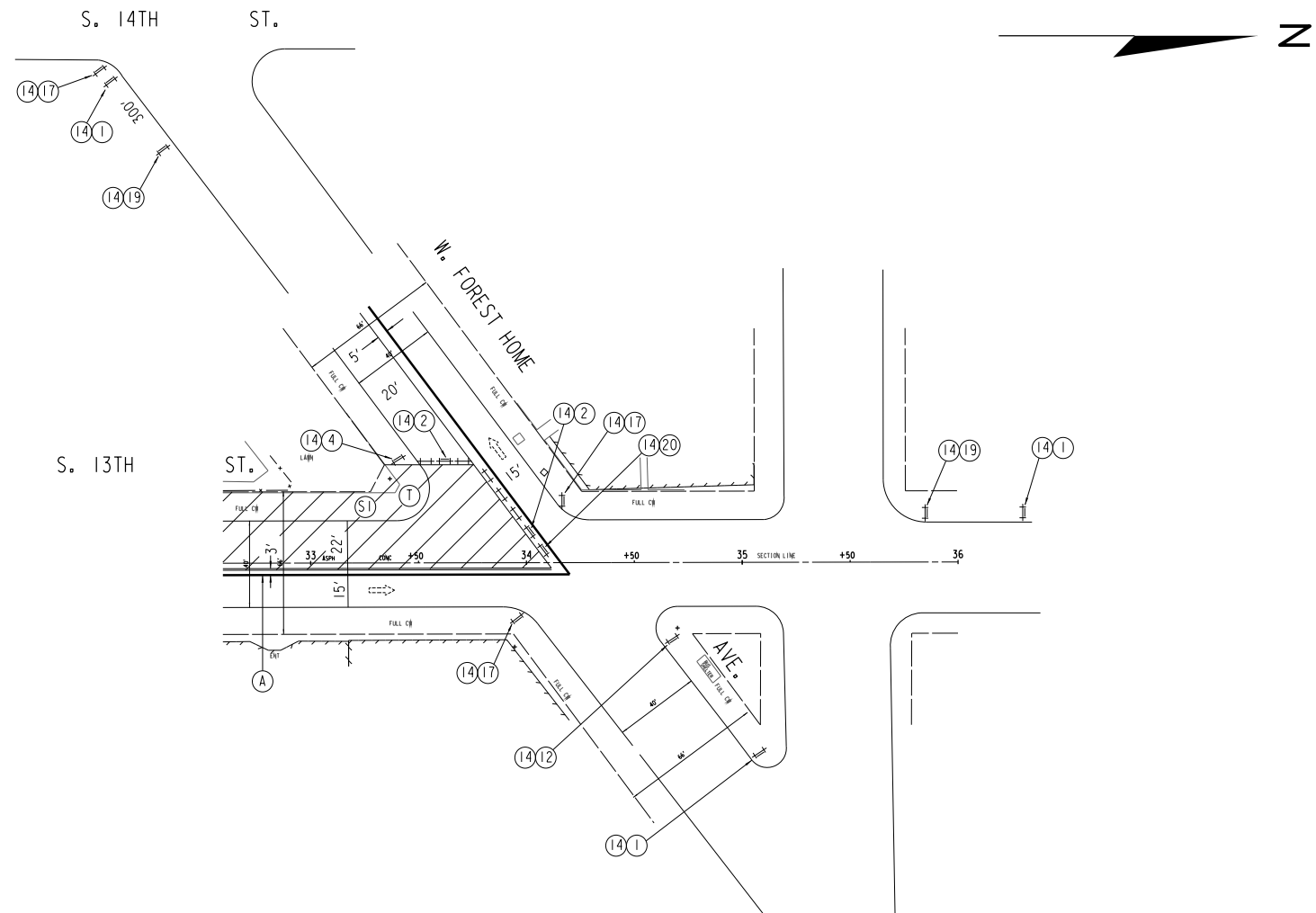
TRAFFIC CONTROL

SCALE FEET 0' 80'

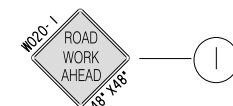
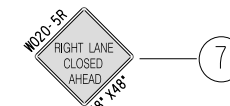
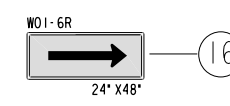
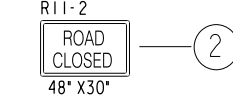
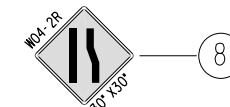
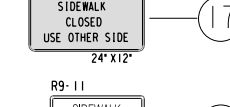
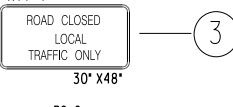
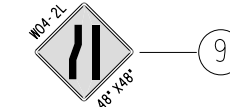
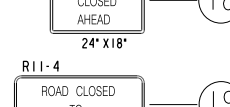
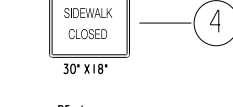
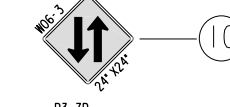
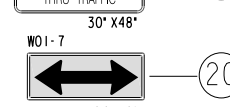
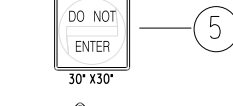
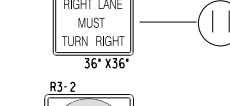
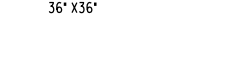
SHEET NO: 58

E

STAGE 1B

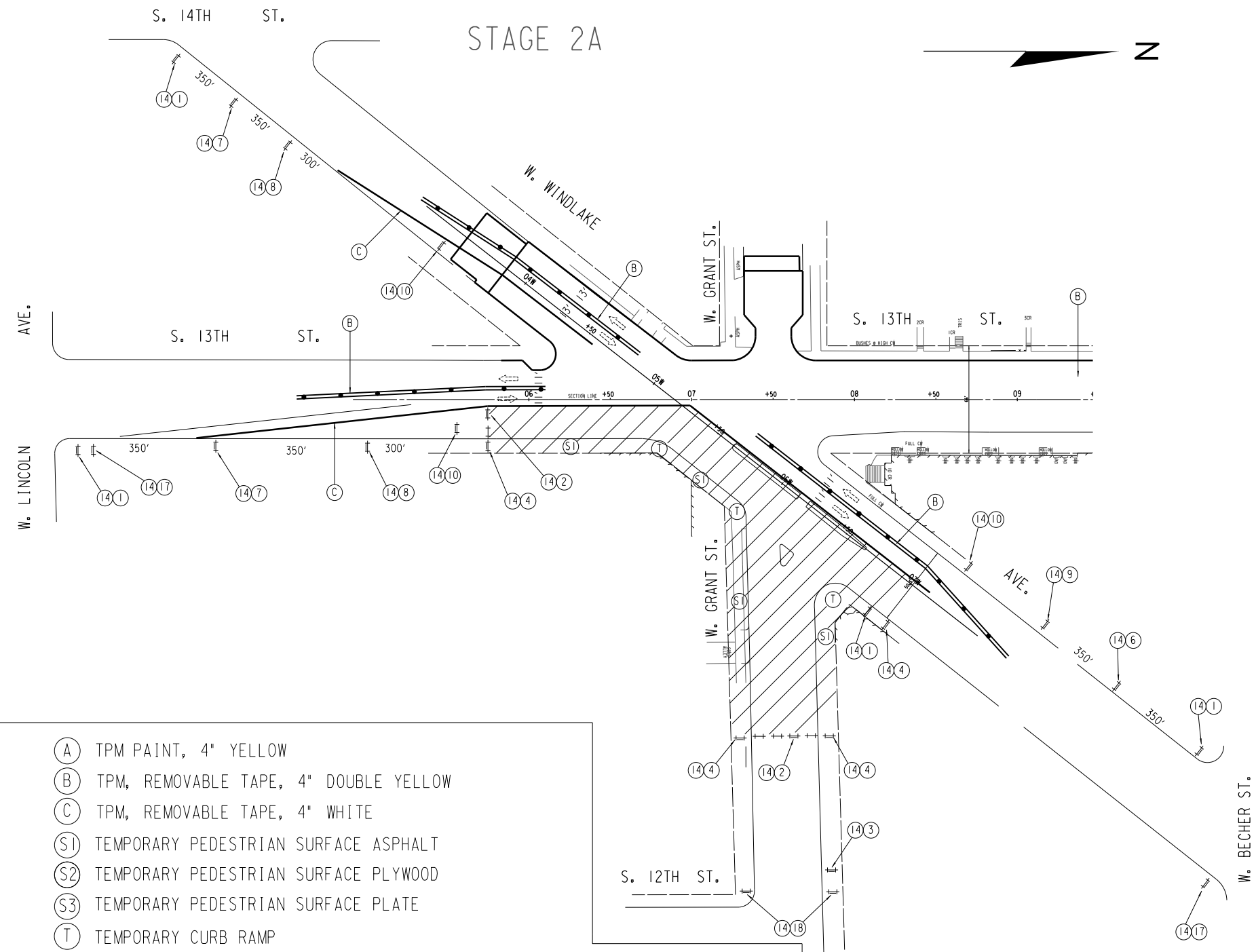


LEGEND

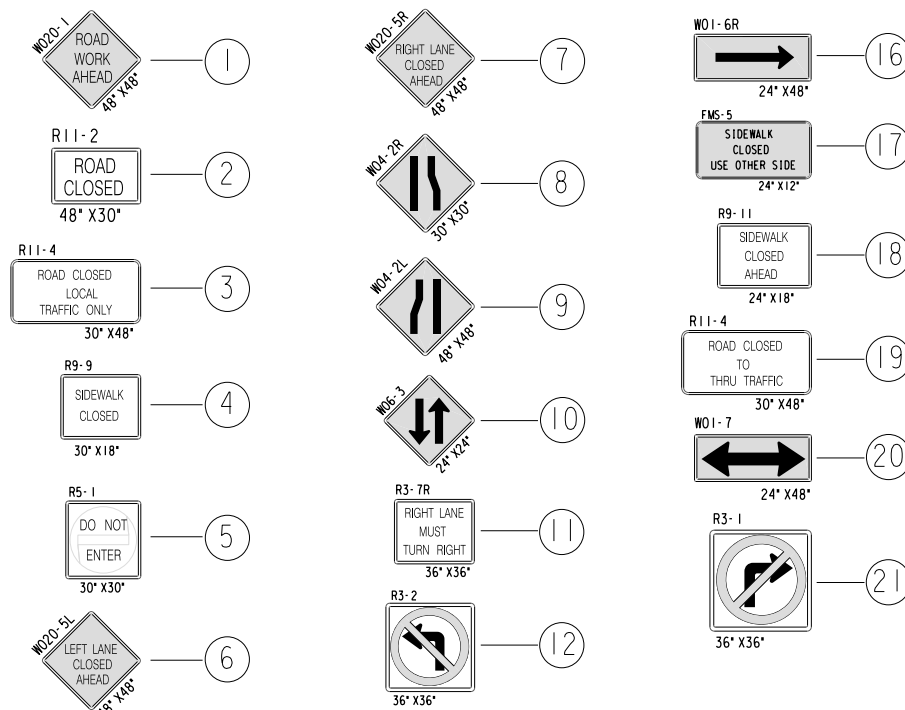
 1	 7	 16
 2	 8	 17
 3	 9	 18
 4	 10	 19
 5	 11	 20
 6	 12	 21

- (A) TPM PAINT, 4" YELLOW
- (B) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (S1) TEMPORARY PEDESTRIAN SURFACE ASPHALT
- (S2) TEMPORARY PEDESTRIAN SURFACE PLYWOOD
- (S3) TEMPORARY PEDESTRIAN SURFACE PLATE
- (T) TEMPORARY CURB RAMP
- DRUMS W/LIGHTS 30' SPACING 
- TYPE III BARRICADES  (14)
- TYPE III BARRICADES W/ SIGN  (14) + (X)
- SIGNS BANDED TO UTILITY POLE 
- WORK AREA 
- DIRECTION OF TRAFFIC 
- TUBULAR MARKERS 25' SPACING 

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED. CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.



LEGEND



- (A) TPM PAINT, 4" YELLOW
(B) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(S1) TEMPORARY PEDESTRIAN SURFACE ASPHALT
(S2) TEMPORARY PEDESTRIAN SURFACE PLYWOOD
(S3) TEMPORARY PEDESTRIAN SURFACE PLATE
(T) TEMPORARY CURB RAMP

- DRUMS W/LIGHTS 30' SPACING 
TYPE III BARRICADES  14
TYPE III BARRICADES W/ SIGN  14 + (X)

- SIGNS BANDED TO UTILITY POLE 
WORK AREA 
DIRECTION OF TRAFFIC 
TUBULAR MARKERS 25' SPACING 

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES
UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING
PAVEMENT MARKINGS.

SHEET 6 OF 13

STATE PROJECT NUMBER 2505-00-75

- -

HWY: LOCAL STREET

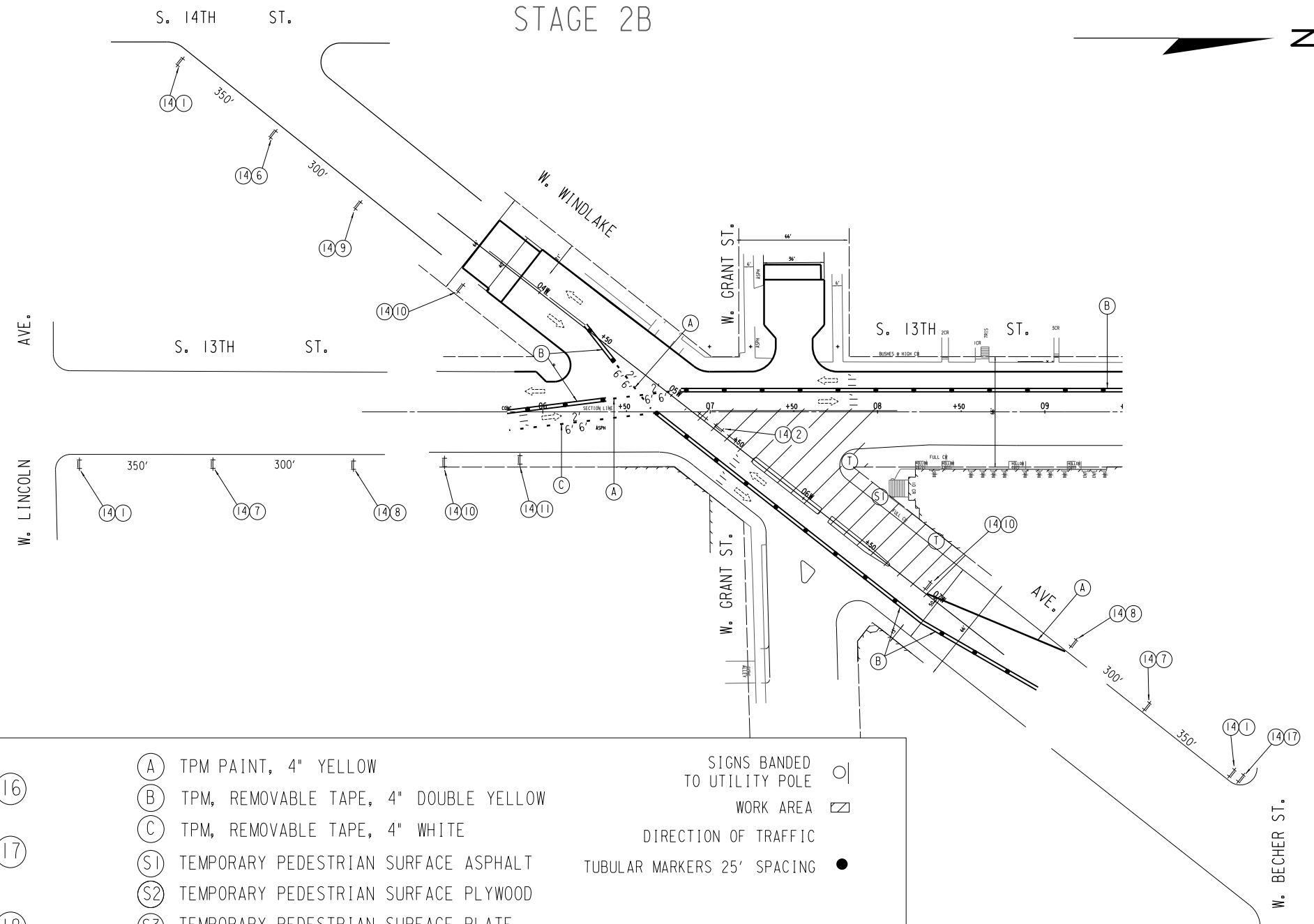
COUNTY: MILWAUKEE

TRAFFIC CONTROL

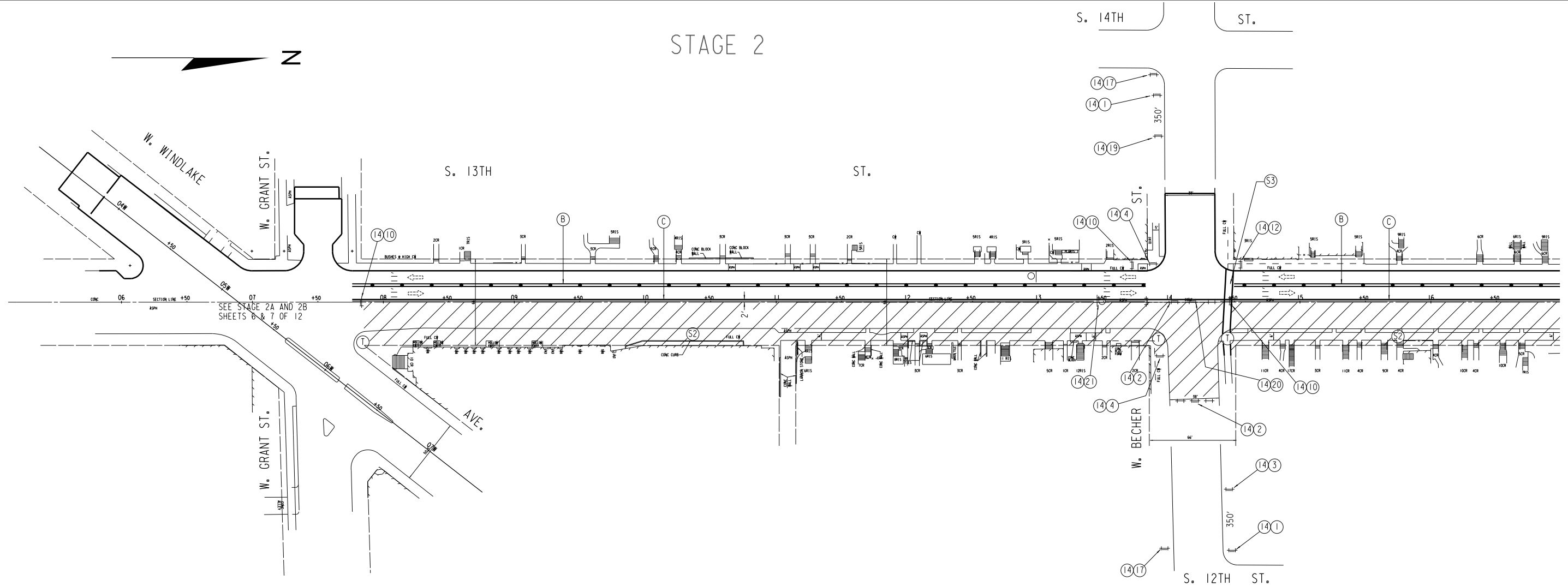
SCALE FEET 

SHEET NO: 60

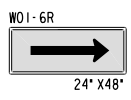
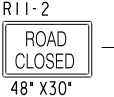
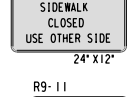
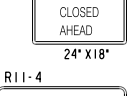
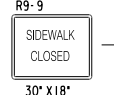
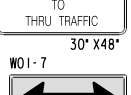
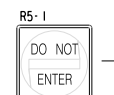
E

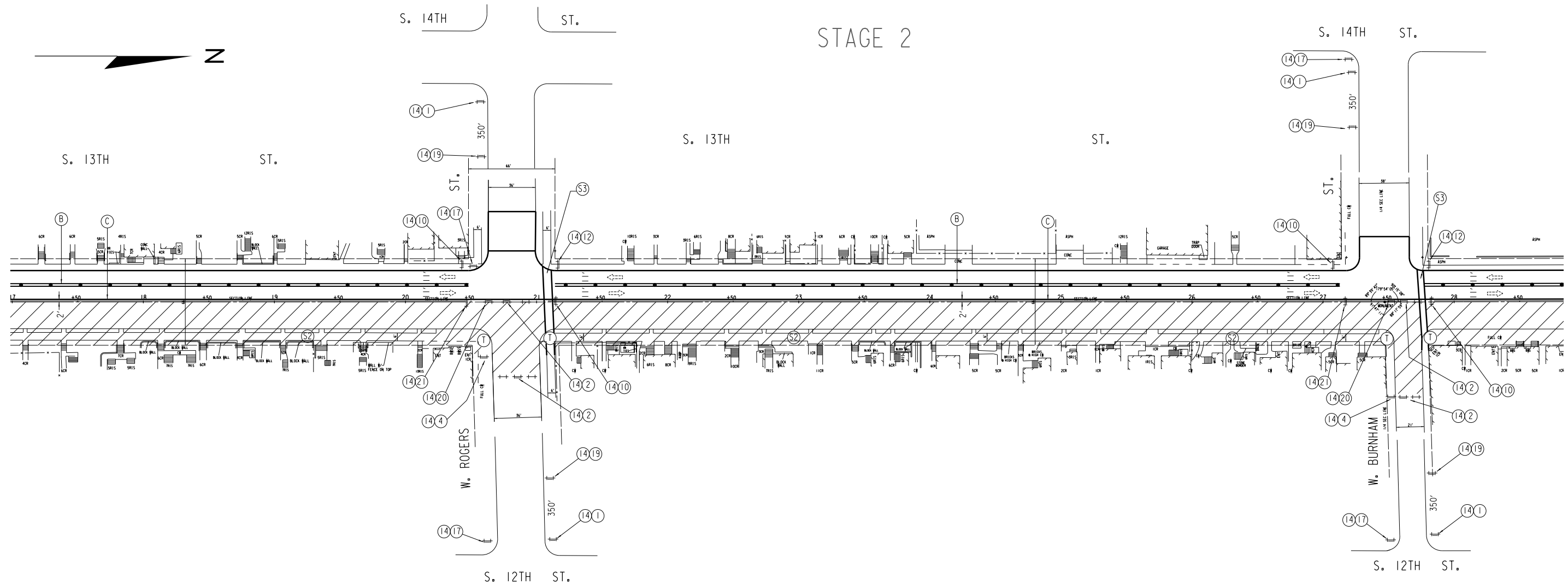


STAGE 2

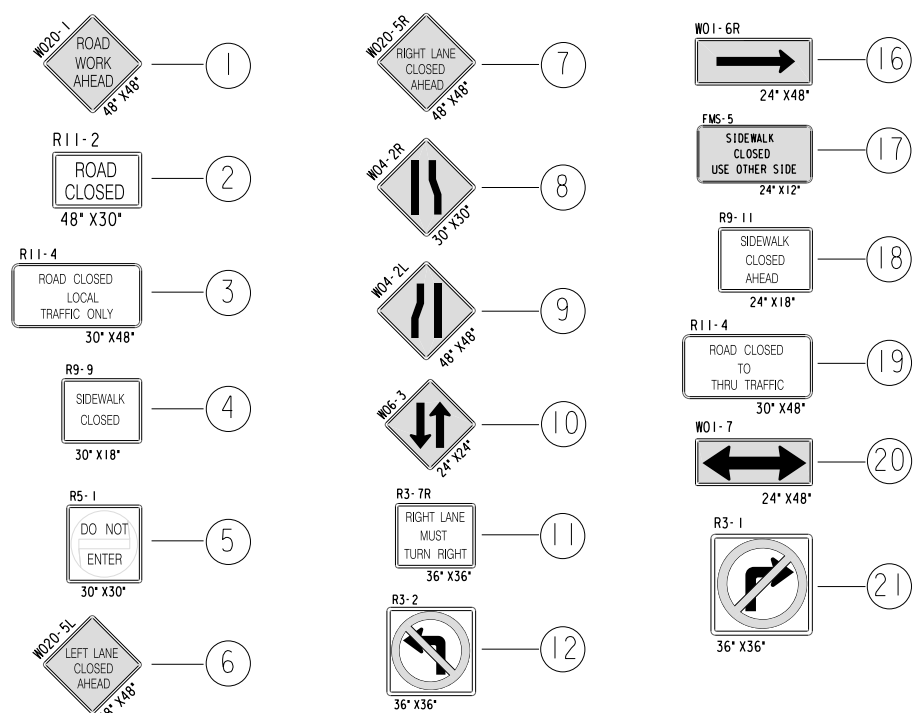


LEGEND

 1	 7	 16	(A) TPM PAINT, 4" YELLOW (B) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW (C) TPM, REMOVABLE TAPE, 4" WHITE (S1) TEMPORARY PEDESTRIAN SURFACE ASPHALT (S2) TEMPORARY PEDESTRIAN SURFACE PLYWOOD (S3) TEMPORARY PEDESTRIAN SURFACE PLATE (T) TEMPORARY CURB RAMP	SIGNS BANDED TO UTILITY POLE  WORK AREA  DIRECTION OF TRAFFIC  TUBULAR MARKERS 25' SPACING 
 2	 8	 17		
 3	 9	 18	NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED. CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.	
 4	 10	 19		
 5	 11	 20		
 6	 12	 21		



LEGEND



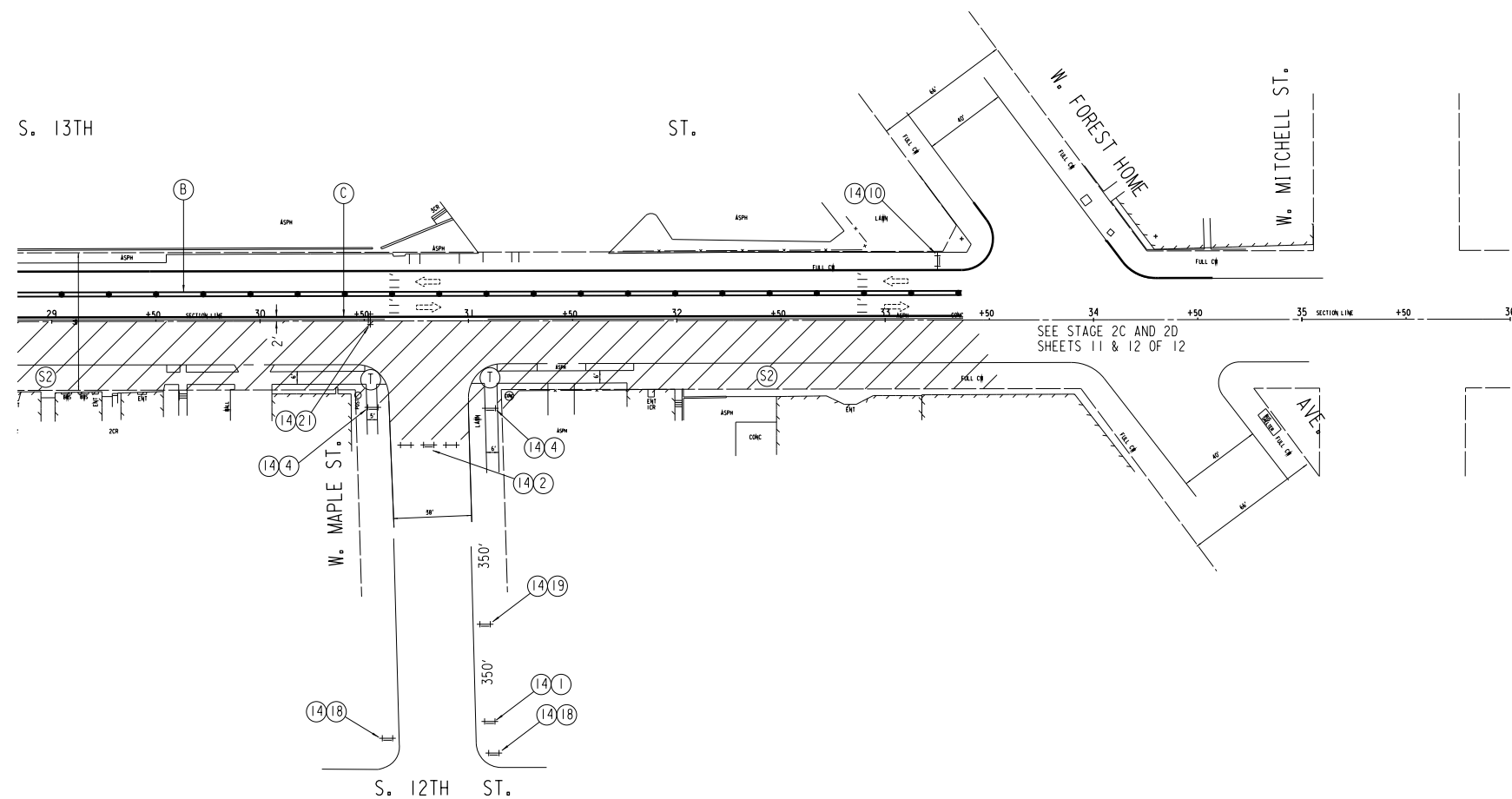
- (A) TPM PAINT, 4" YELLOW
- (B) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (S1) TEMPORARY PEDESTRIAN SURFACE ASPHALT
- (S2) TEMPORARY PEDESTRIAN SURFACE PLYWOOD
- (S3) TEMPORARY PEDESTRIAN SURFACE PLATE
- (T) TEMPORARY CURB RAMP

- DRUMS W/LIGHTS 30' SPACING ● —
- TYPE III BARRICADES ++ — (14)
- TYPE III BARRICADES W/ SIGN ⇄ — (14) + (X)

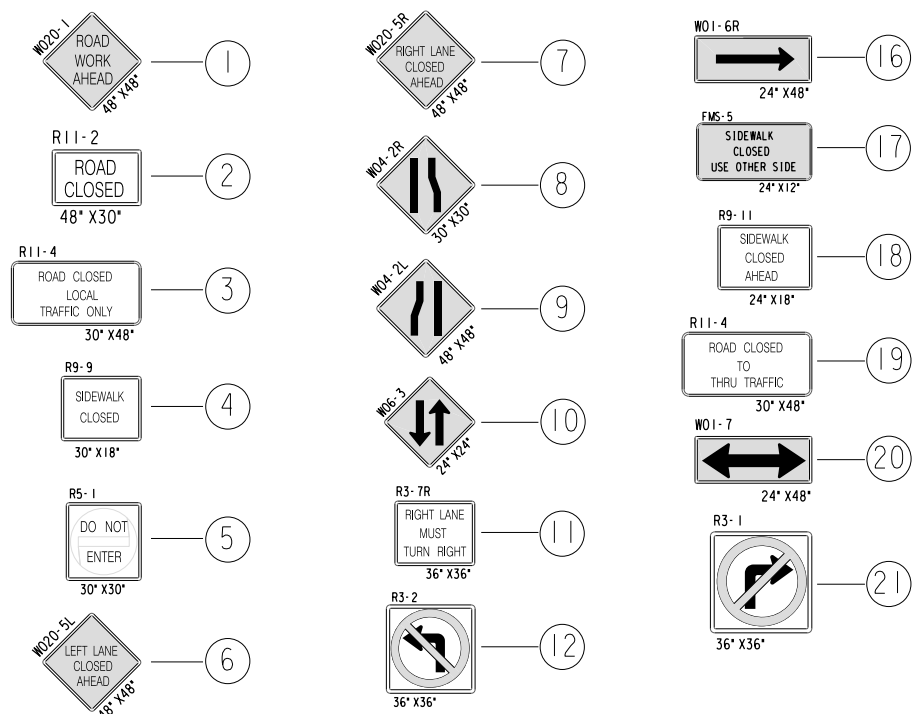
- SIGNS BANDED TO UTILITY POLE ○
- WORK AREA ▨
- DIRECTION OF TRAFFIC →
- TUBULAR MARKERS 25' SPACING ●

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED. CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STAGE 2



LEGEND



- (A) TPM PAINT, 4" YELLOW
(B) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(S1) TEMPORARY PEDESTRIAN SURFACE ASPHALT
(S2) TEMPORARY PEDESTRIAN SURFACE PLYWOOD
(S3) TEMPORARY PEDESTRIAN SURFACE PLATE
(T) TEMPORARY CURB RAMP

- DRUMS W/LIGHTS 30' SPACING
TYPE III BARRICADES ++ (14)
TYPE III BARRICADES W/ SIGN ++ (14) + (X)

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
ALL SIGNS SHALL BE Banded TO EXISTING UTILITY POLES
UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING
PAVEMENT MARKINGS.

- SIGNS Banded TO UTILITY POLE
WORK AREA
DIRECTION OF TRAFFIC
TUBULAR MARKERS 25' SPACING

SHEET 10 OF 13

STATE PROJECT NUMBER 2505-00-75

- -

HWY: LOCAL STREET

COUNTY: MILWAUKEE

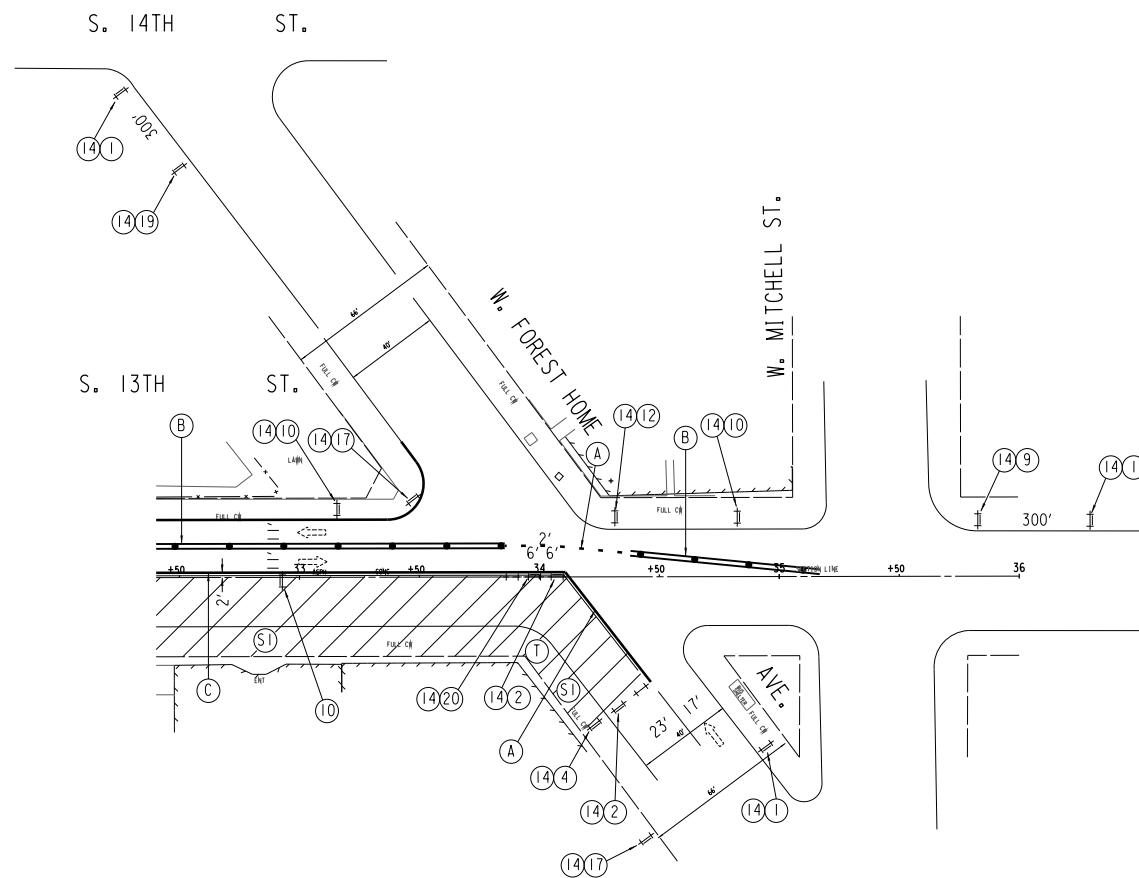
TRAFFIC CONTROL

SCALE FEET 0' 80'

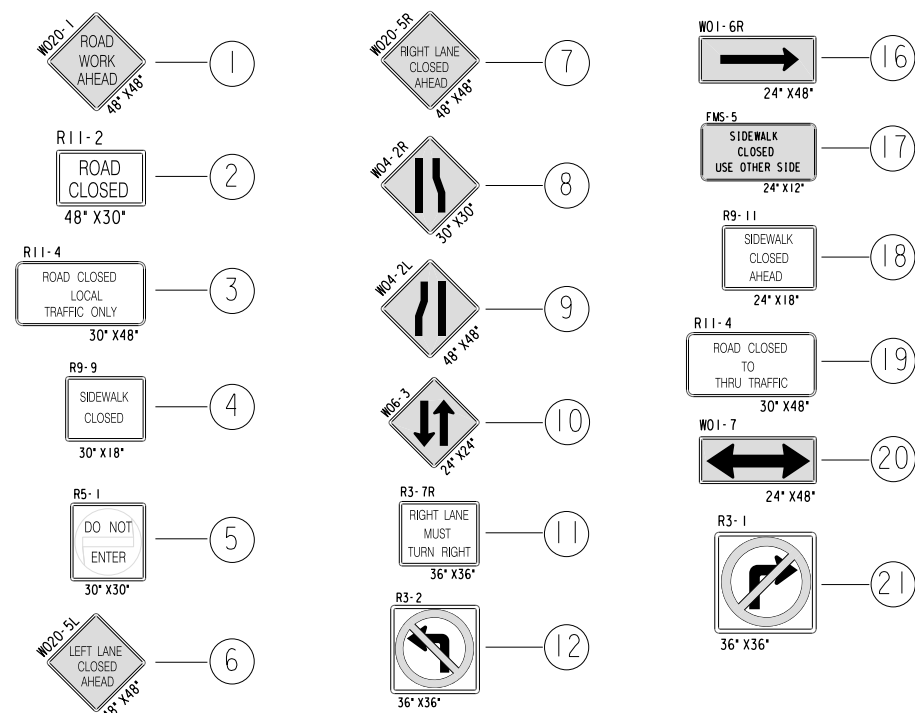
SHEET NO: 64

E

STAGE 2C



LEGEND



- (A) TPM PAINT, 4" YELLOW
- (B) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (S1) TEMPORARY PEDESTRIAN SURFACE ASPHALT
- (S2) TEMPORARY PEDESTRIAN SURFACE PLYWOOD
- (S3) TEMPORARY PEDESTRIAN SURFACE PLATE
- (T) TEMPORARY CURB RAMP

- DRUMS W/LIGHTS 30' SPACING
- TYPE III BARRICADES ++ (14)
- TYPE III BARRICADES W/ SIGN (14) + (X)

- SIGNS BANDED TO UTILITY POLE
- WORK AREA
- DIRECTION OF TRAFFIC
- TUBULAR MARKERS 25' SPACING

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED. CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

SHEET 11 OF 13

STATE PROJECT NUMBER 2505-00-75

- -

HWY: LOCAL STREET

COUNTY: MILWAUKEE

TRAFFIC CONTROL

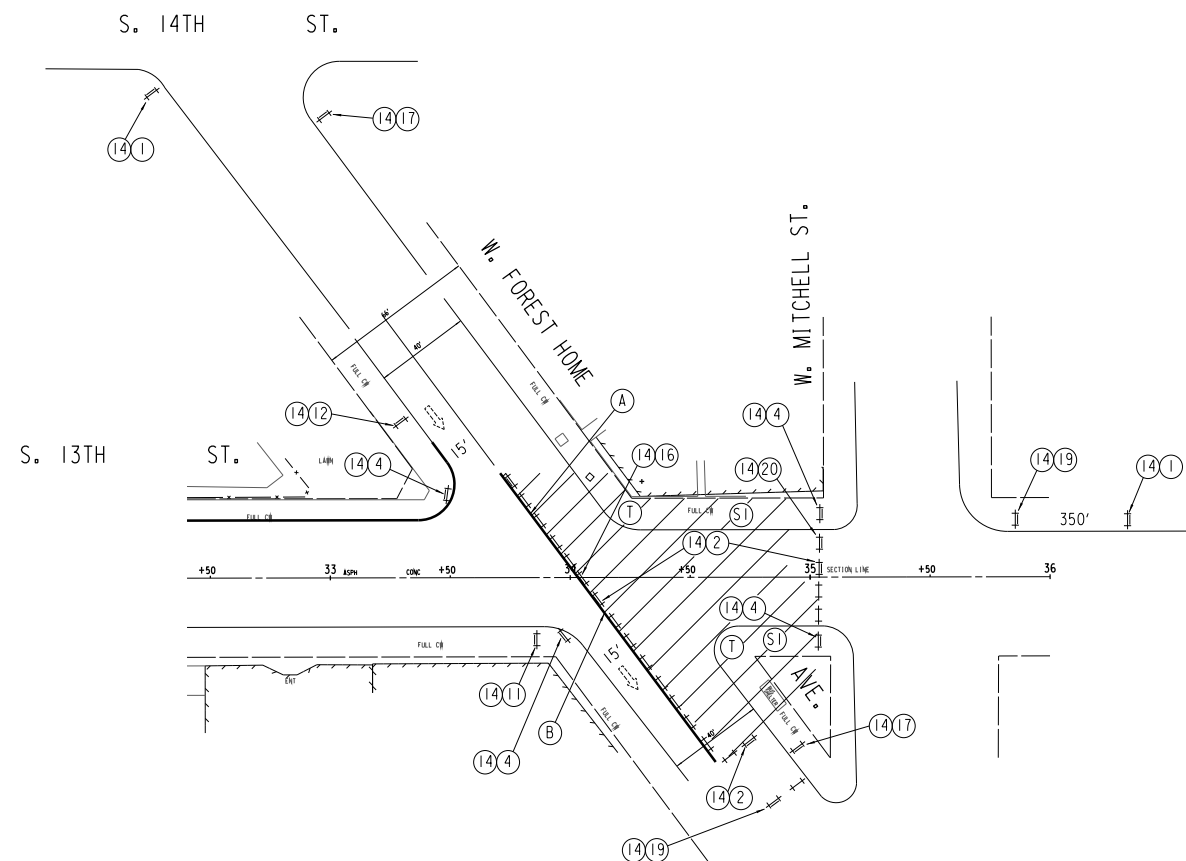
SCALE FEET



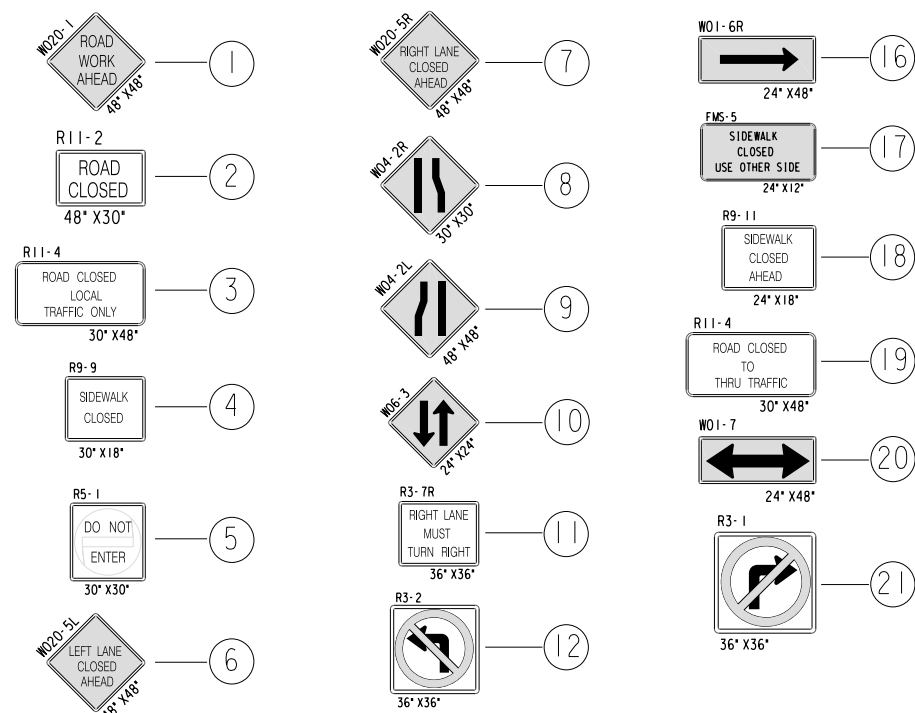
SHEET NO: 65

E

STAGE 2D



LEGEND



- (A) TPM PAINT, 4" YELLOW
(B) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(S1) TEMPORARY PEDESTRIAN SURFACE ASPHALT
(S2) TEMPORARY PEDESTRIAN SURFACE PLYWOOD
(S3) TEMPORARY PEDESTRIAN SURFACE PLATE
(T) TEMPORARY CURB RAMP

- DRUMS W/LIGHTS 30' SPACING ● —
TYPE III BARRICADES ++ — (14)
TYPE III BARRICADES W/ SIGN ++ — (14) + (X)

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES
UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING
PAVEMENT MARKINGS.

- SIGNS BANDED TO UTILITY POLE ○ |
WORK AREA ▨
DIRECTION OF TRAFFIC →
TUBULAR MARKERS 25' SPACING ●

SHEET 12 OF 13

STATE PROJECT NUMBER 2505-00-75

- -

HWY: LOCAL STREET

COUNTY: MILWAUKEE

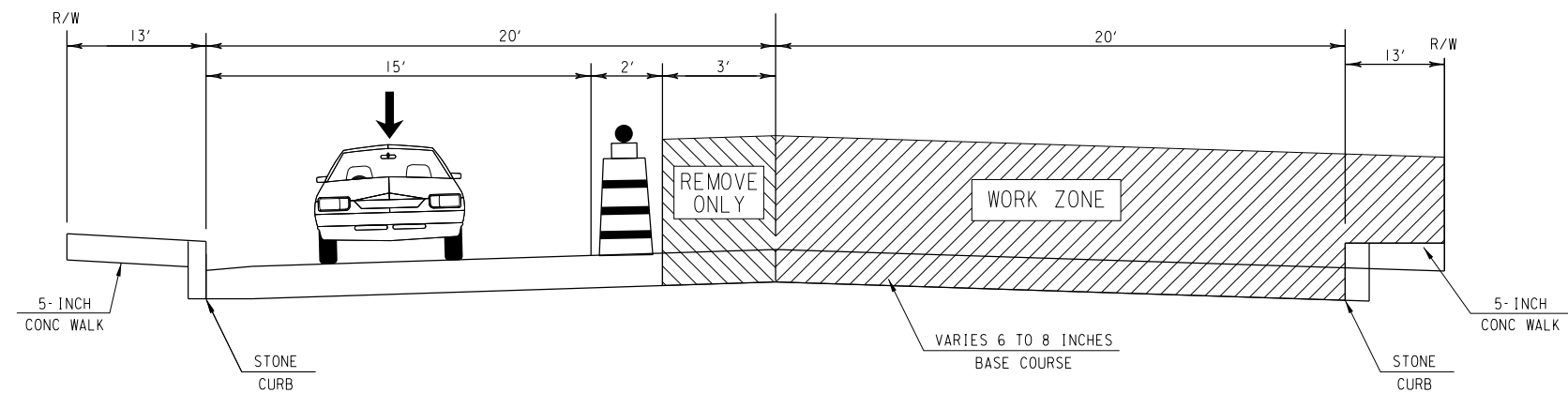
TRAFFIC CONTROL

SCALE FEET 0' 80'

SHEET NO: 66

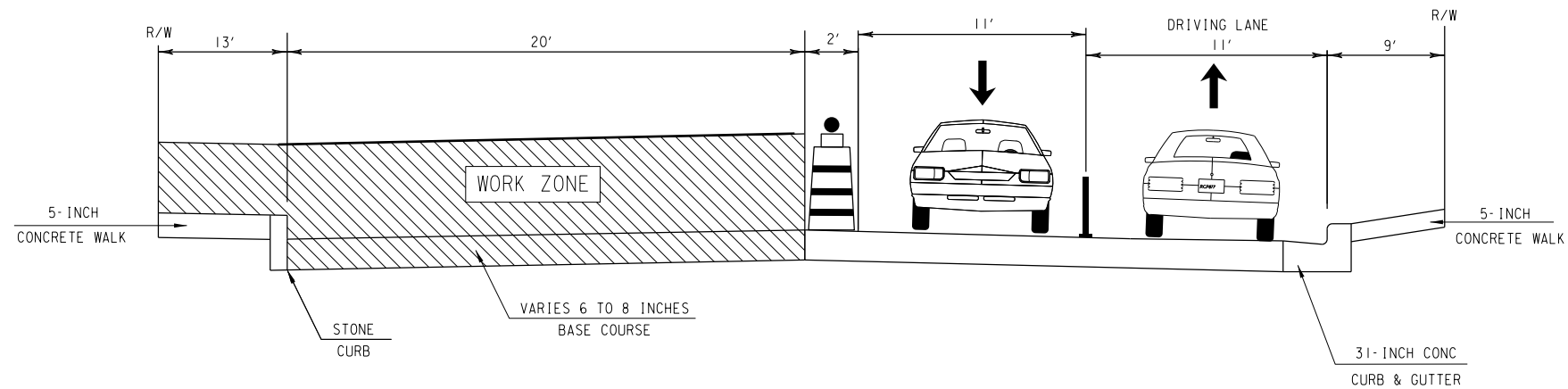
E

STAGE 1

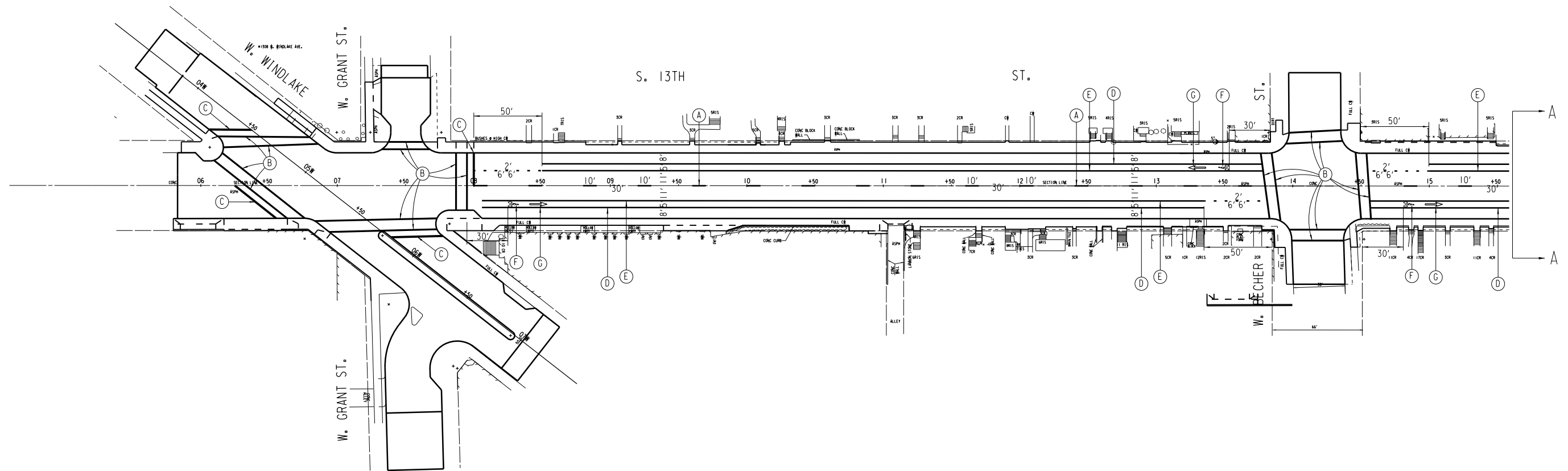


TRAFFIC CONTROL
SOUTH 13TH ST
W. WINDLAKE TO FOREST HOME

STAGE 2



TRAFFIC CONTROL
SOUTH 13TH ST
W. WINDLAKE TO FOREST HOME



- (A) PAVEMENT MARKING EPOXY, 4-INCH YELLOW CENTER LINE
- (B) PAVEMENT MARKING CROSS WALK EPOXY, 12-INCH WHITE
- (C) PAVEMENT MARKING STOP LINE EPOXY, 24-INCH WHITE
- (D) PAVEMENT MARKING EPOXY, 4-INCH WHITE
- (E) PAVEMENT MARKING EPOXY, 6-INCH WHITE
- (F) PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
- (G) PAVEMENT MARKING ARROWS BIKE LANE EPOXY

SHEET 1 OF 3

STATE PROJECT NUMBER 2505-00-75

- -

HWY: LOCAL STREET

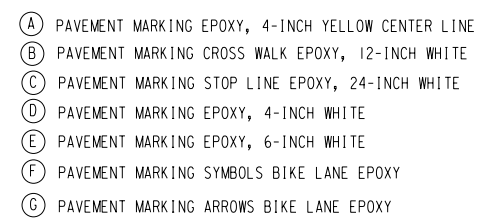
COUNTY: MILWAUKEE

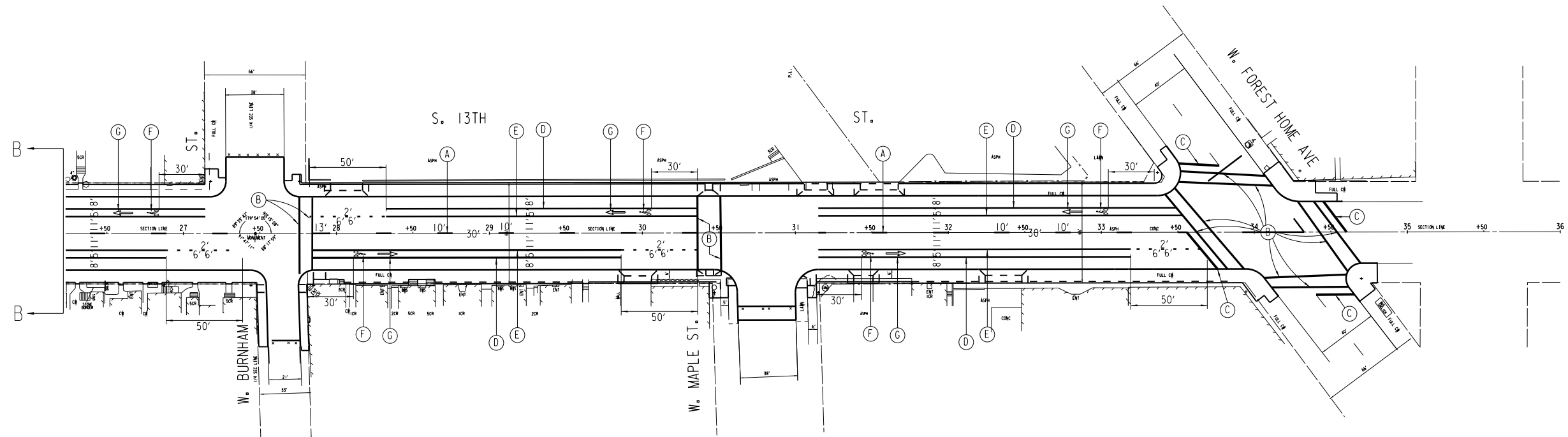
PAVEMENT MARKING

SCALE FEET

SHEET NO: 68

E





- (A) PAVEMENT MARKING EPOXY, 4-INCH YELLOW CENTER LINE
- (B) PAVEMENT MARKING CROSS WALK EPOXY, 12-INCH WHITE
- (C) PAVEMENT MARKING STOP LINE EPOXY, 24-INCH WHITE
- (D) PAVEMENT MARKING EPOXY, 4-INCH WHITE
- (E) PAVEMENT MARKING EPOXY, 6-INCH WHITE
- (F) PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
- (G) PAVEMENT MARKING ARROWS BIKE LANE EPOXY

SHEET 3 OF 3

STATE PROJECT NUMBER 2505-00-75

- -

HWY: LOCAL STREET

COUNTY: MILWAUKEE

PAVEMENT MARKING

SCALE FEET

SHEET NO: 70

E

TRAFFIC & STREET LIGHTING GENERAL NOTES:

PRIOR TO CONSTRUCTION, THE LOCATION OF UNDERGROUND UTILITIES SHALL BE DETERMINED IN THE FIELD BY CONTACTING "DIGGERS HOTLINE."

STREET LIGHTING & TRAFFIC SIGNALS SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 652 EXCEPT:

THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCLUDING REPAIRS, REPLACEMENT OR RELOCATION ETC. OF STREET LIGHTING OR TRAFFIC SIGNAL FACILITIES IF THE CONTRACTOR DOES ANY DEVIATION FROM THE STREET LIGHTING OR TRAFFIC SIGNAL DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED PERMISSION.

- 1
- DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
- 2
- LOCATIONS OF THE PVC CONDUITS WHERE THEY ARE REQUIRED ARE IDENTIFIED IN THE PRINTS. HOWEVER, INSTALLATION MAY REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. ANY RELOCATIONS MUST BE APPROVED BY THE ENGINEER. FIELD MARK EACH CONDUIT LOCATION BY STAMPING AND PAINTING WITH RED PAINT ON TOP AND BACKSIDE OF CURB.
- 3
- TYPICAL CONDUIT INSTALLED UP TO DIRECT BURIED STREET LIGHT POLES IS AS FOLLOWS 3-INCH OR 2.5-INCH (AS NOTED) SCHEDULE 40 RIGID PVC TO STREET LIGHTING METAL HOUSING (PEDESTAL), THE 1.5-INCH SCHEDULE 40 RIGID PVC TO STREET LIGHT POLE CABLE SLOT, AND THE 2-INCH SCHEDULE 40 RIGID PVC TO SIGNAL STANDARD BASE AND RISER FOR TRAFFIC SIGNAL ON STREET LIGHT POLE.
- 4
- DEPTH OF CONDUIT INSTALLED BELOW THE STREETS, HIGHWAYS, ROADS, AND ALLEYS SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM. (MEASURED FROM FINISHED FLANGE LINE)
- 5
- CONDUIT INSTALLED BEHIND CURB, AND UNDER DRIVEWAYS SHALL BE INSTALLED AT THE BASE OF THE BACKSIDE OF THE CURB/GUTTER SECTION.
- 6
- WHEN THERE IS MORE THAN ONE CONDUIT TO BE LAID BEHIND THE CURB, PLACE ALL CONDUITS IN THE SAME TRENCH.
- 7
- ANY EXCEPTION TO THE MINIMUM OR MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.
- 8
- THE TRENCH SHALL BE FREE OF DEBRIS AND OVERPOUR AND SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.
- 9
- BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.
- 10
- ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS. (SEE NEC 352.28 2008 CODE)
- 11
- PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED IMMEDIATELY AFTER INSTALLATION WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGLY ON THE CONDUIT, BUT EASILY REMOVED IN THE FUTURE. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.
- 12
- ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.
- 13
- CONDUIT RUNS SHALL BE THE SAME SIZE PIPE FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX OR JUNCTION BOX OR BASE TO BASE, ETC.).
- 14
- PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUIT.
- 15
- ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS UNLESS OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.
- 16
- WHEN ENDS OF CONDUIT DO NOT CONNECT TO A VAULT AND WILL END UP UNDER CONCRETE WALK. THE CONTRACTOR IS REQUIRED TO LEAVE A 24" X 24" BOX FORM CENTERED OVER THE END OF CONDUIT AND FILL THE BOXFORM WITH CRUSHED GRAVEL. (PER WISDOT SPEC 209.2.1(I) GRANULAR BACKFILL)
- 17
- ALL PIPE CROSSINGS AND VAULTS SHALL BE AT LEAST SIX (6) FEET AWAY FROM FIRE HYDRANTS, UNLESS NOTED OTHERWISE, OR APPROVED BY THE STREET LIGHTING ENGINEER.
- 18
- ALL POLES AND TRAFFIC STANDARDS IN CONCRETE ARE REQUIRED TO HAVE A 30"X30" BOX SHAPED JOINT PLACED AROUND THEM USING AN EXPANSION JOINT FILLER. UNLESS NOTED OTHERWISE (SEE DETAIL 122)
- 19
- TYPICAL RECTANGULAR VAULTS SHOULD BE INSTALLED AS SHOWN ON PLANS, BUT WHEN IT IS NOT POSSIBLE, A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS AND FIRE HYDRANTS SHOULD BE USED, OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

TRAFFIC & STREET LIGHTING GENERAL NOTES:

- 20
- COORDINATE NEW CONDUIT CONNECTIONS WITH EXISTING CONDUIT, DUCT PACKAGES, AND VAULTS/ MANHOLES WITH CITY OF MILWAUKEE STREET LIGHTING. THE CITY REQUIRES THREE WORKING DAYS ADVANCED NOTICE. CONTACT ELECTRICAL SUPERVISOR STREET LIGHTING - DENNIS MILLER (OFFICE) 414-286-5942 (CELL) 414-708-4251 OR DISPATCHER @ 414-286-5944 TRAFFIC SIGNALS - AL NICHOLS (OFFICE) 414-286-3687 (CELL) 414-708-5148 OR DISPATCHER @ 414-286-3687
- 21
- IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL VAULT, CONDUIT AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH CONCRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SHOP SUPERVISORS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK. STREET LIGHTING - DENNIS MILLER (OFFICE) 414-286-5942 (CELL) 414-708-4251 STREET LIGHTING - GEORGE BERDINE (OFFICE) 414-286-5943 (CELL) 414-708-4245 STREET LIGHTING - THOMAS HUGHES (OFFICE) 414-286-3457 (CELL) 414-708-3175 STREET LIGHTING - DISPATCHER @ 414-286-5944 TRAFFIC SIGNALS - AL NICHOLS (OFFICE) 414-286-3687 (CELL) 414-708-5148 TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687
- 22
- CONDUIT WILL ONLY BE INSTALLED AFTER THE CURB IS POURED, UNLESS APPROVED BY BOTH THE ENGINEER & STREET LIGHTING SHOP SUPERVISOR.

UTILITY LINE CODE

- *SAN*

————

SANITARY SEWER
- *STO*

————

STORM SEWER
- *W*

————

WATER
- *G*

————

GAS
- — — —

6

— — — —

PROPOSED GAS
- *E*

————

ELECTRIC
- *TE&ES*

————

TRAFFIC & STREET LIGHTING
- — — — —

— — — — —

OLD CITY UNDERGROUND CONDUIT
- *CUC*

————

PROPOSED CITY UNDERGROUND CONDUIT
- *T*

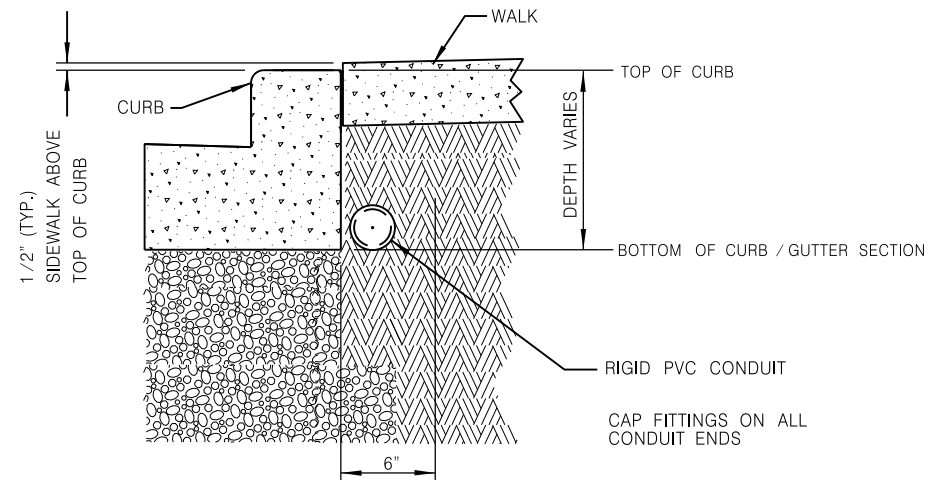
————

TELEPHONE
- *TV*

————

CABLE

NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.
2.) CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.



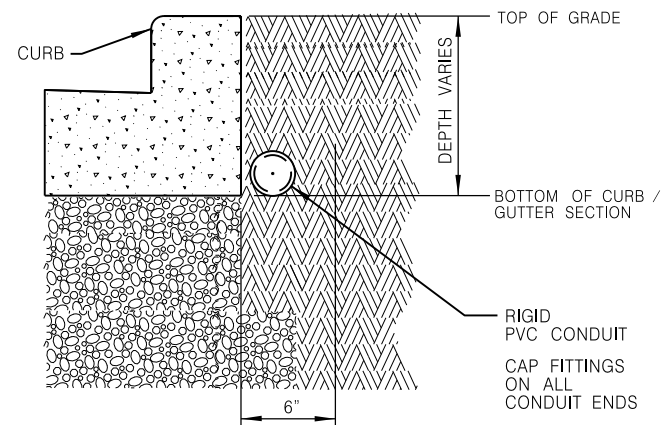
100 DETAIL "A"
TYPICAL CONDUIT INSTALLATION
BEHIND CURB NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

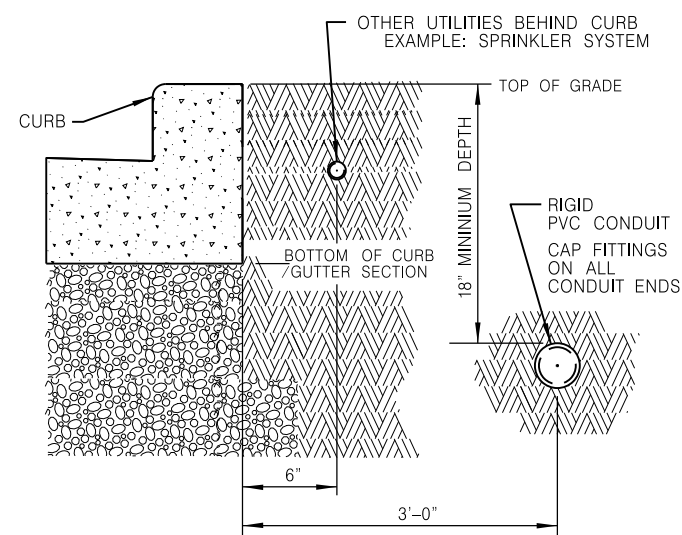
NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.

DETAIL "B"

CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.

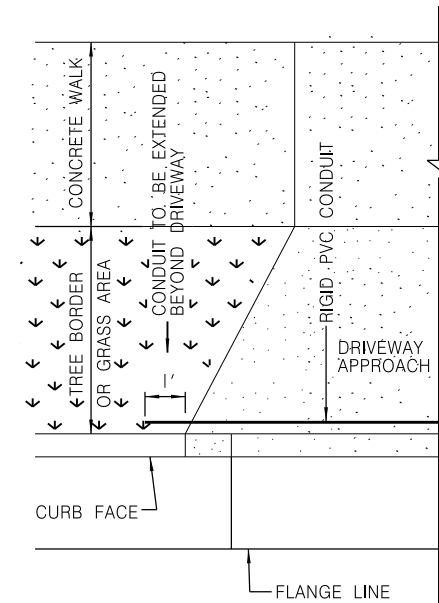


DETAIL "C"

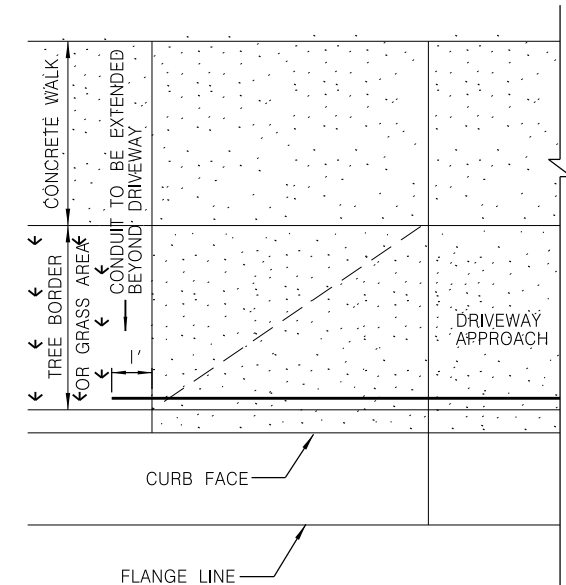


100 DETAIL "B" & "C"
TYPICAL CONDUIT INSTALLATION
BEHIND CURB NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

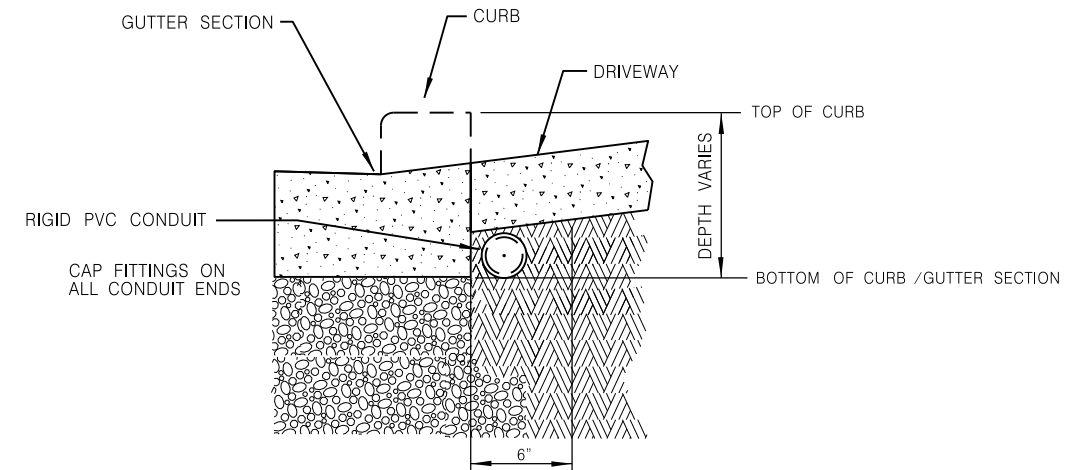


TYPICAL PLAN VIEW FOR
FLARED DRIVEWAY



TYPICAL PLAN VIEW FOR
DEPRESSED DRIVEWAY

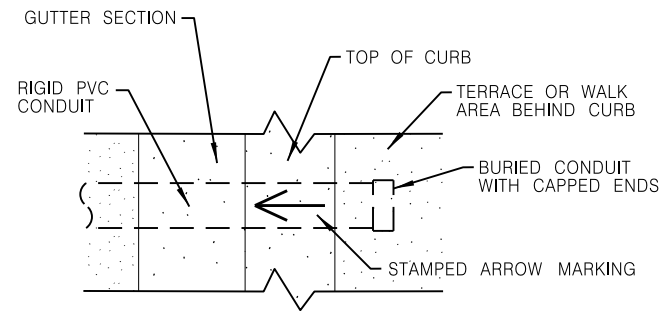
NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.
2.) CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.



100 DETAIL
TYPICAL CONDUIT INSTALLATION
UNDER DRIVEWAYS OR PEDESTRIAN RAMPS NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

SHEET 2 OF 10

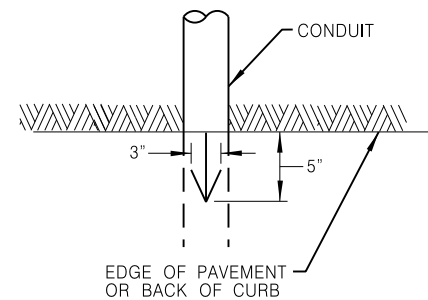


TOP VIEW OF CURB STAMPING

NOT TO SCALE

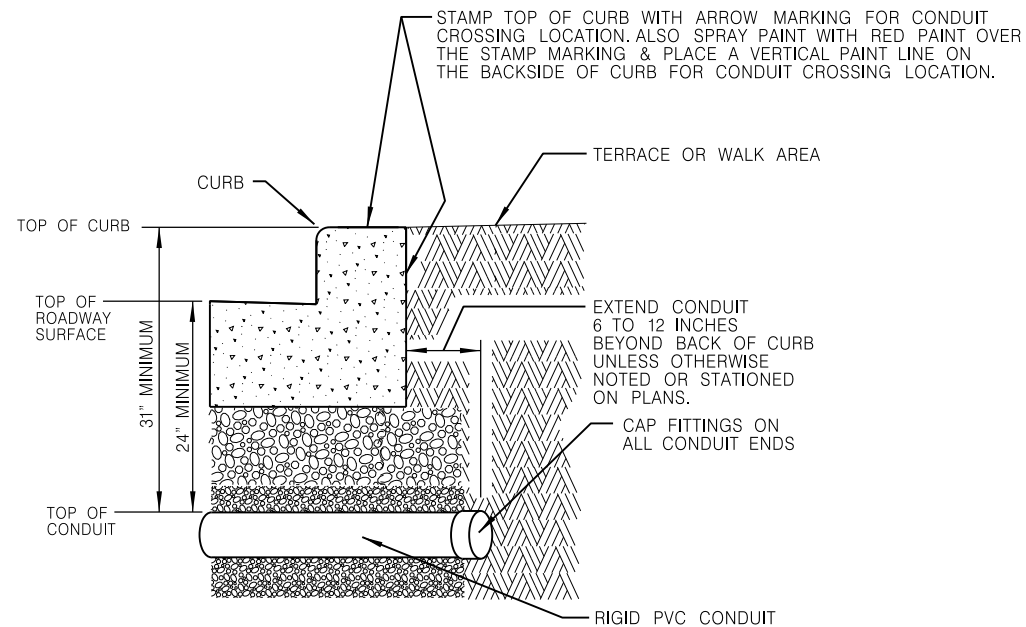
NOTE:

ARROW MARK SHALL BE INSCRIBED IN PAVEMENT SURFACE 1/4-INCH TO 3/8-INCH DEEP AT EACH LOCATION WHERE CONDUITS ARE PLACED UNDER THE PAVEMENT.



ARROW MARK

NOT TO SCALE



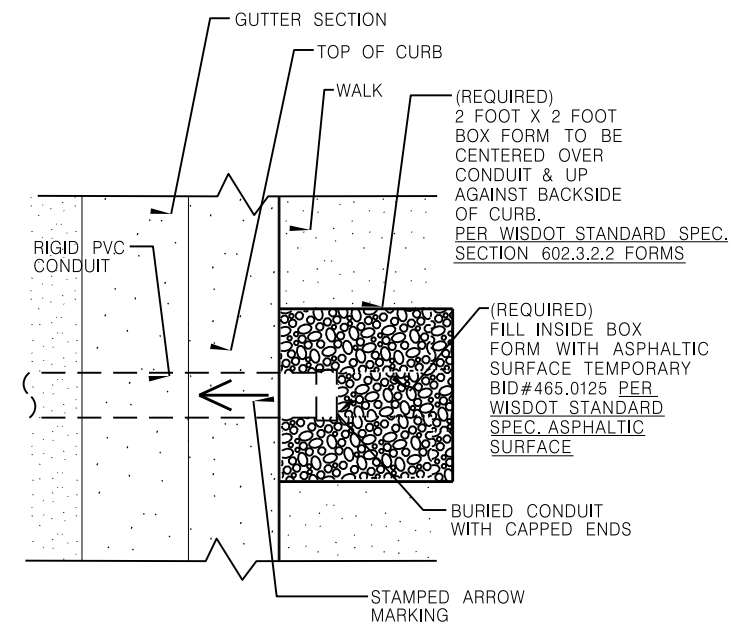
102

DETAIL VERSION #1

NOT TO SCALE

TYPICAL CONDUIT INSTALLATION
FOR CROSSING ROADWAYS

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

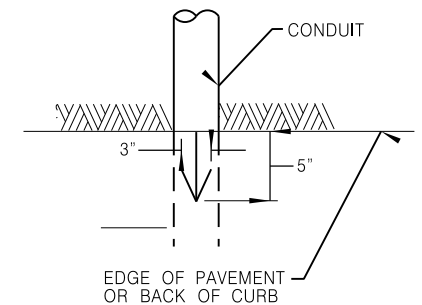


TOP VIEW OF CURB STAMPING

NOT TO SCALE

NOTE:

ARROW MARK SHALL BE INSCRIBED IN PAVEMENT SURFACE 1/4-INCH TO 3/8-INCH DEEP AT EACH LOCATION WHERE CONDUITS ARE PLACED UNDER THE PAVEMENT.

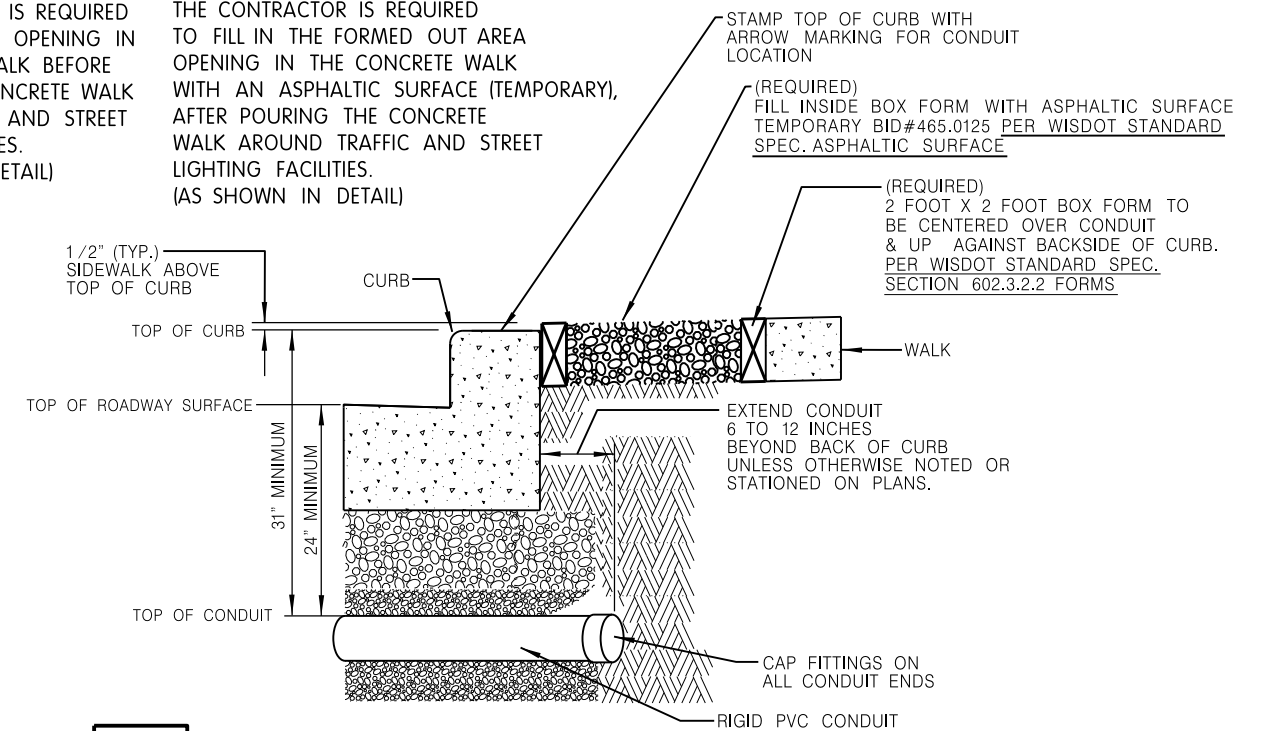


ARROW MARK

NOT TO SCALE

THE CONTRACTOR IS REQUIRED TO FORM OUT A OPENING IN THE CONCRETE WALK BEFORE POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN DETAIL)

THE CONTRACTOR IS REQUIRED TO FILL IN THE FORMED OUT AREA OPENING IN THE CONCRETE WALK WITH AN ASPHALTIC SURFACE (TEMPORARY), AFTER POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN DETAIL)



102

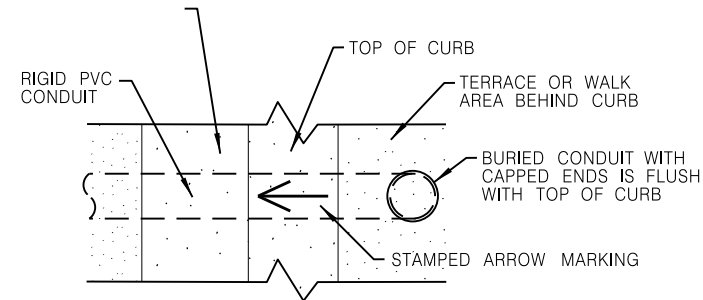
DETAIL VERSION 1

NOT TO SCALE

TYPICAL CONDUIT INSTALLATION
FOR CROSSING ROADWAYS
FROM FULL WALK AREAS

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

SHEET 3 OF 10

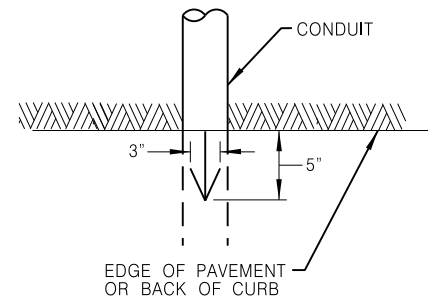


TOP VIEW OF CURB STAMPING

NOT TO SCALE

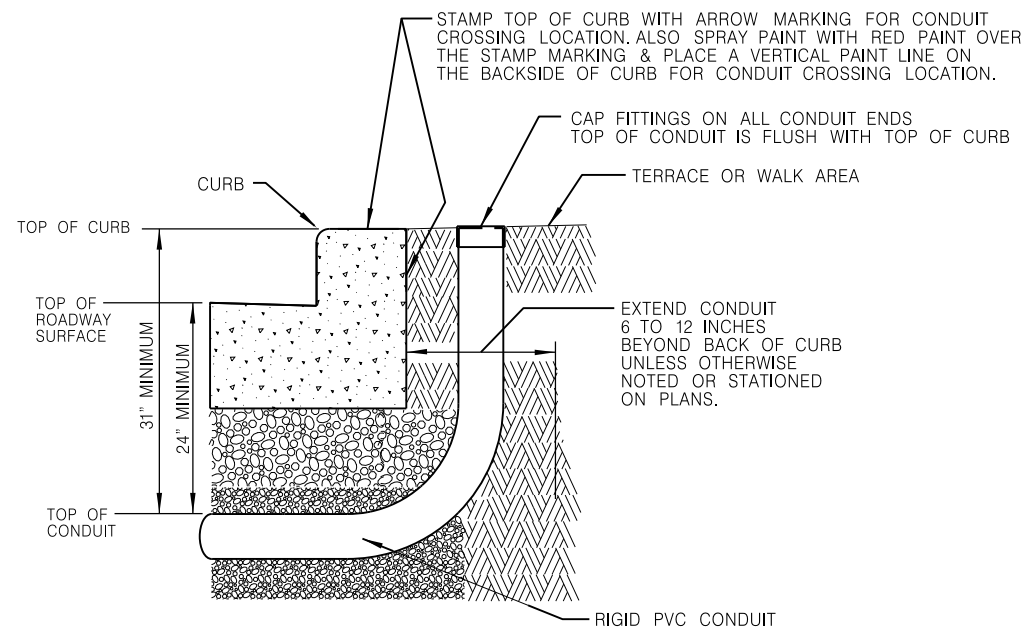
NOTE:

ARROW MARK SHALL BE INSCRIBED IN PAVEMENT SURFACE 1/4-INCH TO 3/8-INCH DEEP AT EACH LOCATION WHERE CONDUITS ARE PLACED UNDER THE PAVEMENT.



ARROW MARK

NOT TO SCALE



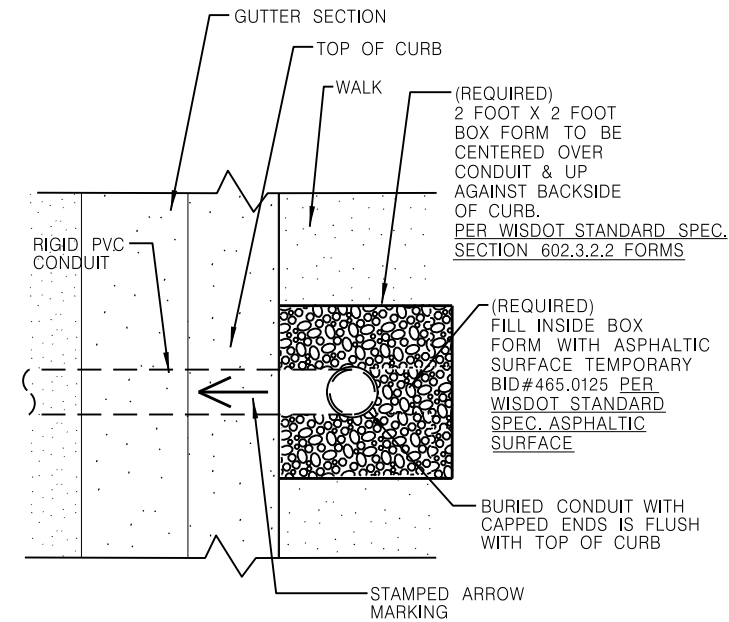
102

DETAIL VERSION #2

TYPICAL CONDUIT INSTALLATION
FOR CROSSING ROADWAYS

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

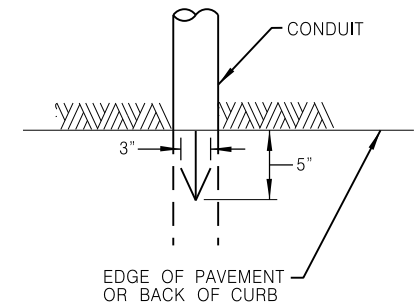


TOP VIEW OF CURB STAMPING

NOT TO SCALE

NOTE:

ARROW MARK SHALL BE INSCRIBED IN PAVEMENT SURFACE 1/4-INCH TO 3/8-INCH DEEP AT EACH LOCATION WHERE CONDUITS ARE PLACED UNDER THE PAVEMENT.

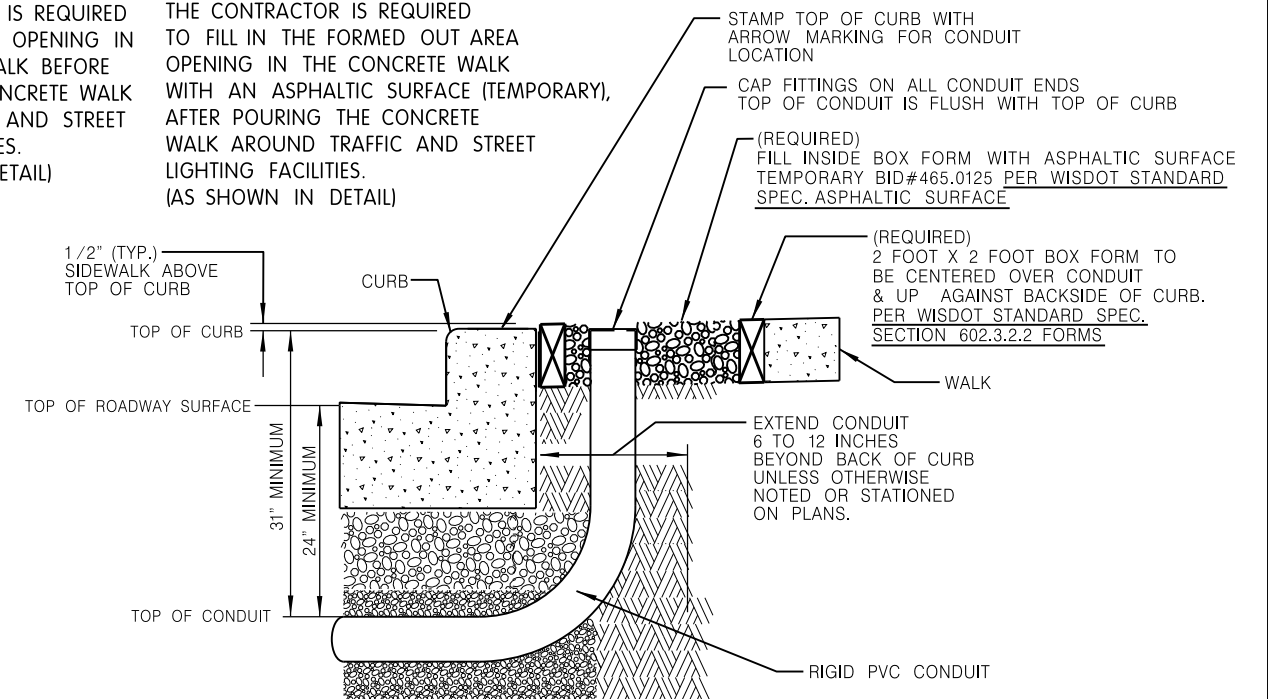


ARROW MARK

NOT TO SCALE

THE CONTRACTOR IS REQUIRED TO FORM OUT A OPENING IN THE CONCRETE WALK BEFORE POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN DETAIL)

THE CONTRACTOR IS REQUIRED TO FILL IN THE FORMED OUT AREA OPENING IN THE CONCRETE WALK WITH AN ASPHALTIC SURFACE (TEMPORARY), AFTER POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN DETAIL)



102

DETAIL VERSION #2

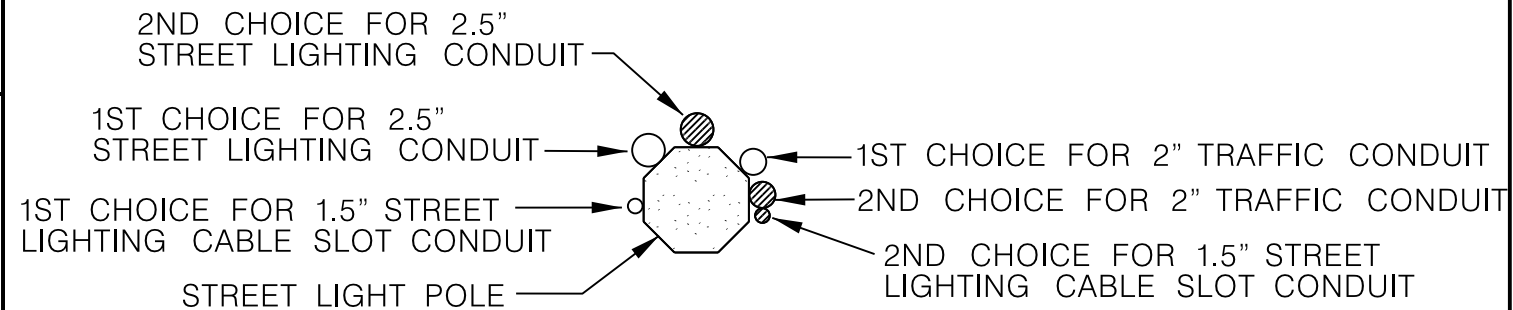
TYPICAL CONDUIT INSTALLATION
FROM FULL WALK AREAS

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

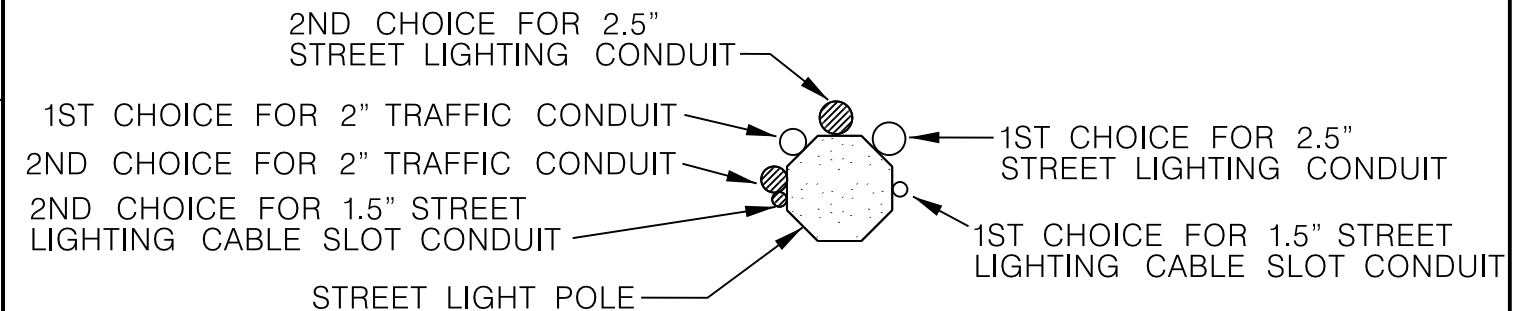
SHEET 4 OF 10

NOTE: CAP FITTINGS ON
CONDUIT ENDS



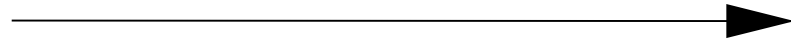
GUTTER SECTION

DIRECTION OF TRAFFIC AT CURB



GUTTER SECTION

DIRECTION OF TRAFFIC AT CURB



104

DETAIL

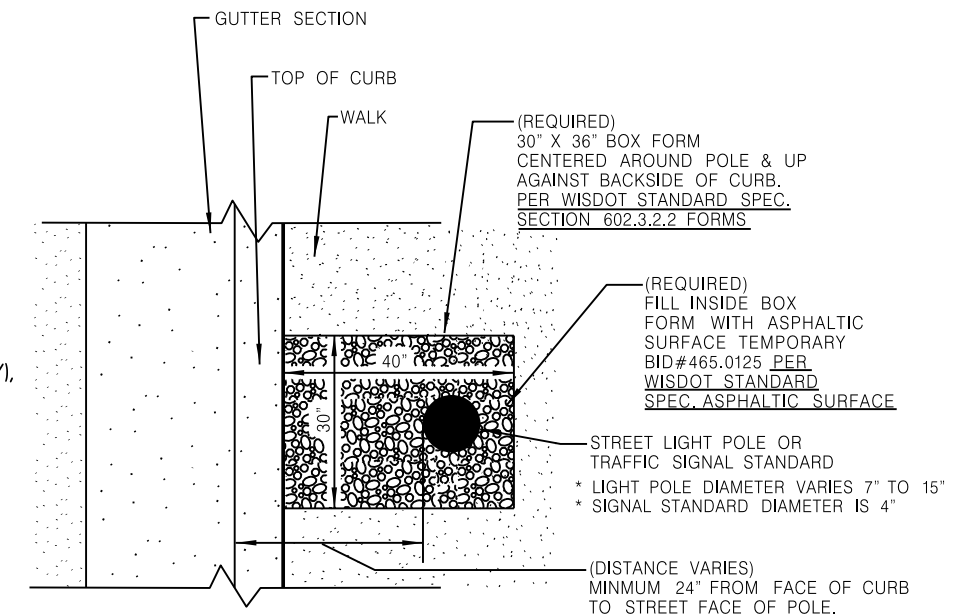
TYPICAL TRAFFIC SIGNAL RISER AND
STREET LIGHTING CONDUIT LOCATIONS
ON LIGHT POLES DEPENDING ON DIRECTION OF
TRAFFIC AT CURB

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM TRAFFIC / STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

THE CONTRACTOR IS REQUIRED
TO FORM OUT A OPENING IN
THE CONCRETE WALK BEFORE
POURING THE CONCRETE WALK
AROUND TRAFFIC AND STREET
LIGHTING FACILITIES.
(AS SHOWN IN ADJACENT DETAIL)

THE CONTRACTOR IS REQUIRED
TO FILL IN THE FORMED OUT AREA
OPENING IN THE CONCRETE WALK
WITH AN ASPHALTIC SURFACE (TEMPORARY),
AFTER POURING THE CONCRETE
WALK AROUND TRAFFIC AND STREET
LIGHTING FACILITIES.
(AS SHOWN IN ADJACENT DETAIL)



DETAIL

105

TYPICAL 30" X 40" BOX FORM
AROUND STREET LIGHTING POLE OR
TRAFFIC SIGNAL STANDARD

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

NOT TO SCALE

SHEET 5 OF 10

THE CONTRACTOR IS REQUIRED TO FORM OUT A OPENING IN THE CONCRETE WALK BEFORE POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES.

THE CONTRACTOR IS REQUIRED TO FILL IN THE FORMED OUT AREA OPENING IN THE CONCRETE WALK WITH AN ASPHALTIC SURFACE (TEMPORARY), AFTER POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES.

STREET LIGHTING FORCES TO DETERMINE LOCATION OF TRANSFORMER BOX FORM

OPTION #1

(REQUIRED)
18" X 60" BOX FORM TO BE UP AGAINST BACKSIDE OF CURB. PER WISDOT STANDARD SPEC. SECTION 602.3.2.2 FORMS (LOCATION OF BOX FORM PER STREET LIGHTING)

STREET LIGHT POLE DIAMETER VARIES 7" TO 15"

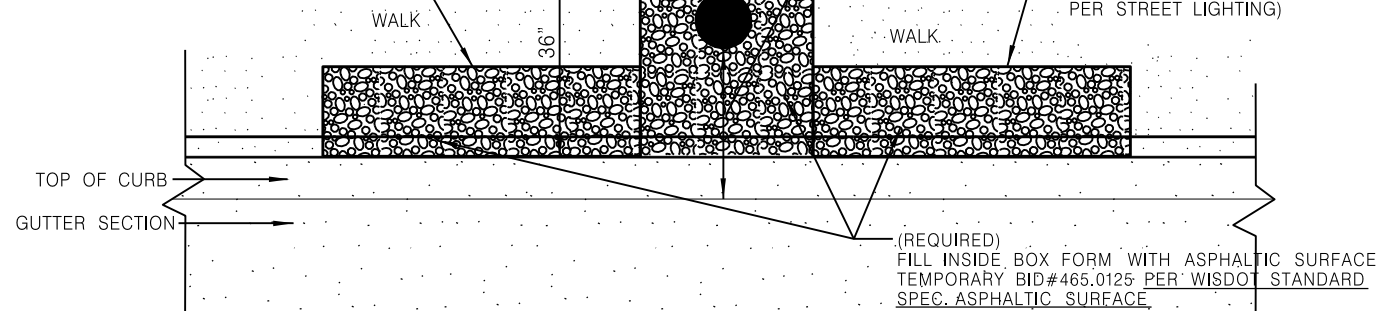
30"

(REQUIRED)
30" X 36" BOX FORM CENTERED AROUND POLE & UP AGAINST BACKSIDE OF CURB PER WISDOT STANDARD SPEC. SECTION 602.3.2.2 FORMS

OPTION #2

(REQUIRED)
18" X 60" BOX FORM TO BE UP AGAINST BACKSIDE OF CURB. PER WISDOT STANDARD SPEC. SECTION 602.3.2.2 FORMS (LOCATION OF BOX FORM PER STREET LIGHTING)

(DISTANCE VARIES) MINIMUM 24" FROM FACE OF CURB TO STREET FACE OF POLE.



106

DETAIL VERSION #1

TYPICAL 18" X 60" BOX FORM FOR STREET LIGHTING TRANSFORMER

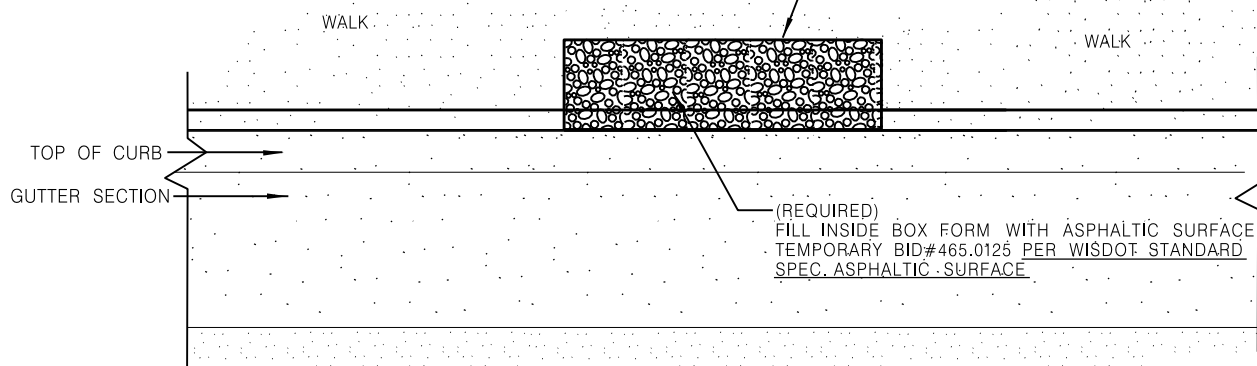
NOT TO SCALE

THE CONTRACTOR IS REQUIRED TO FORM OUT A OPENING IN THE CONCRETE WALK BEFORE POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES.

THE CONTRACTOR IS REQUIRED TO FILL IN THE FORMED OUT AREA OPENING IN THE CONCRETE WALK WITH AN ASPHALTIC SURFACE (TEMPORARY), AFTER POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES.

STREET LIGHTING FORCES TO DETERMINE LOCATION OF TRANSFORMER BOX FORM

(REQUIRED)
18" X 60" BOX FORM TO BE UP AGAINST BACKSIDE OF CURB. PER WISDOT STANDARD SPEC. SECTION 602.3.2.2 FORMS (LOCATION OF BOX FORM PER STREET LIGHTING)



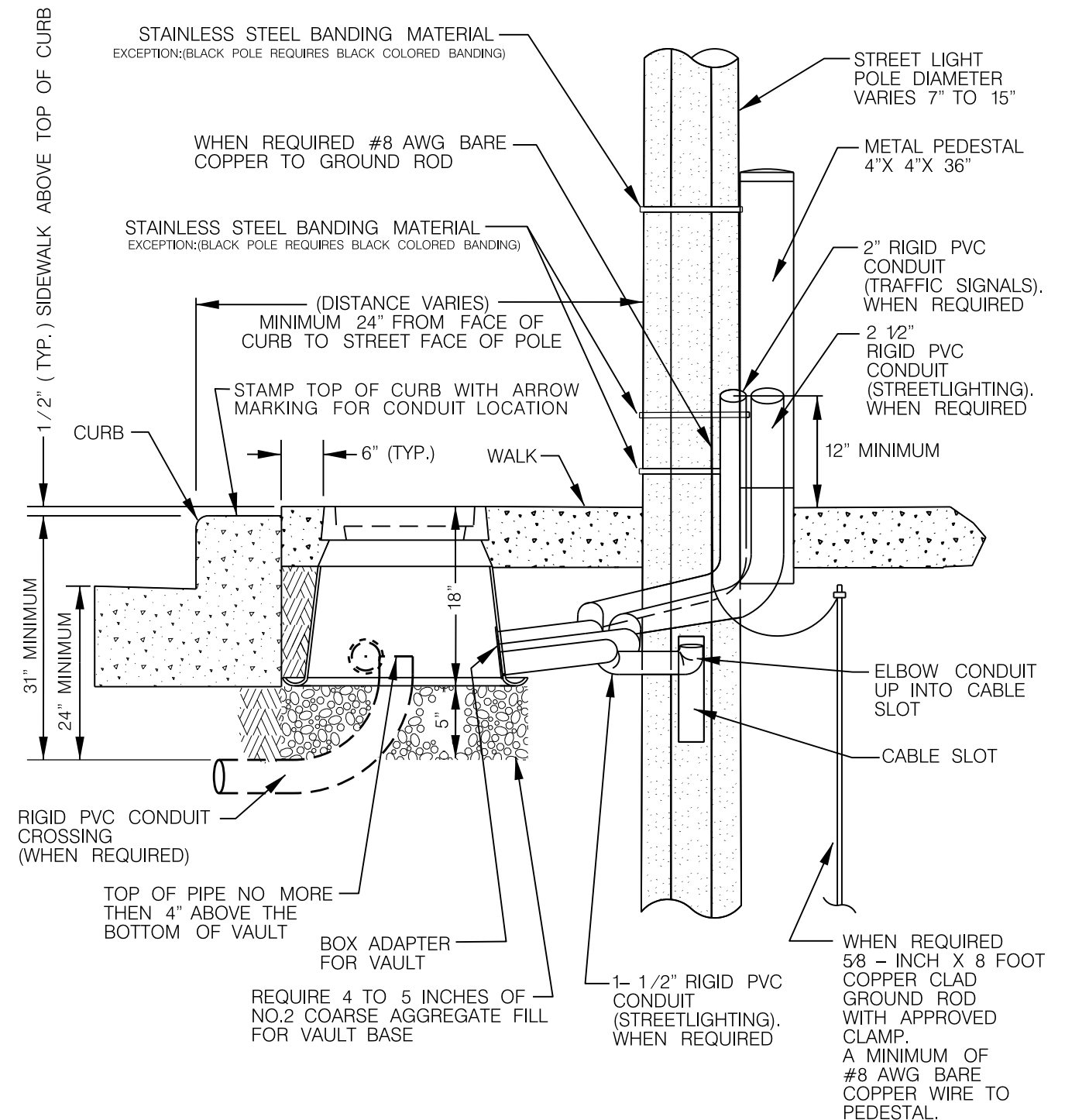
106

DETAIL VERSION #2

TYPICAL 18" X 60" BOX FORM FOR STREET LIGHTING TRANSFORMER

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.



108

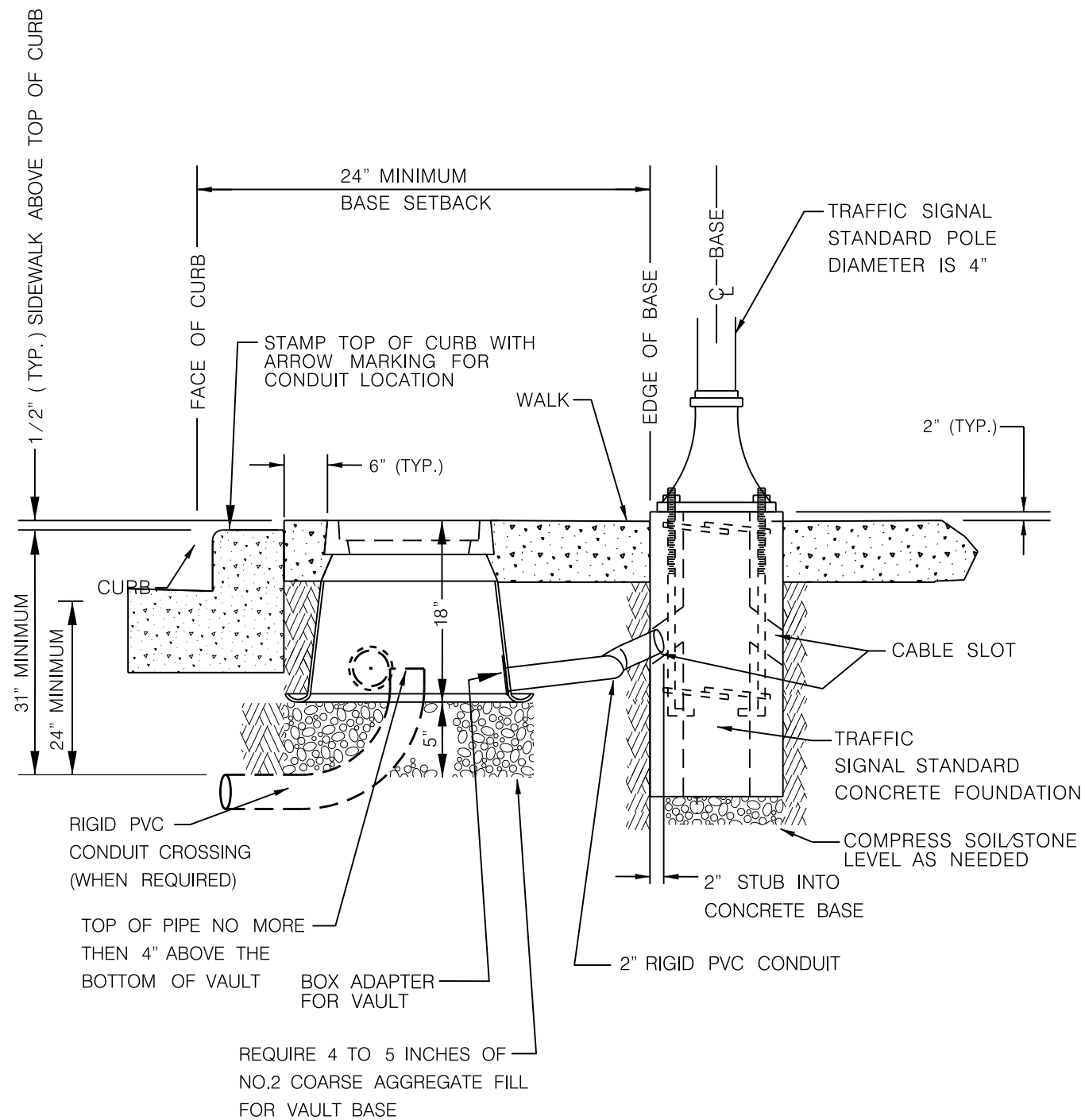
DETAIL

TYPICAL CONDUIT INSTALLATION FROM VAULT TO POLE

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

SHEET 6 OF 10



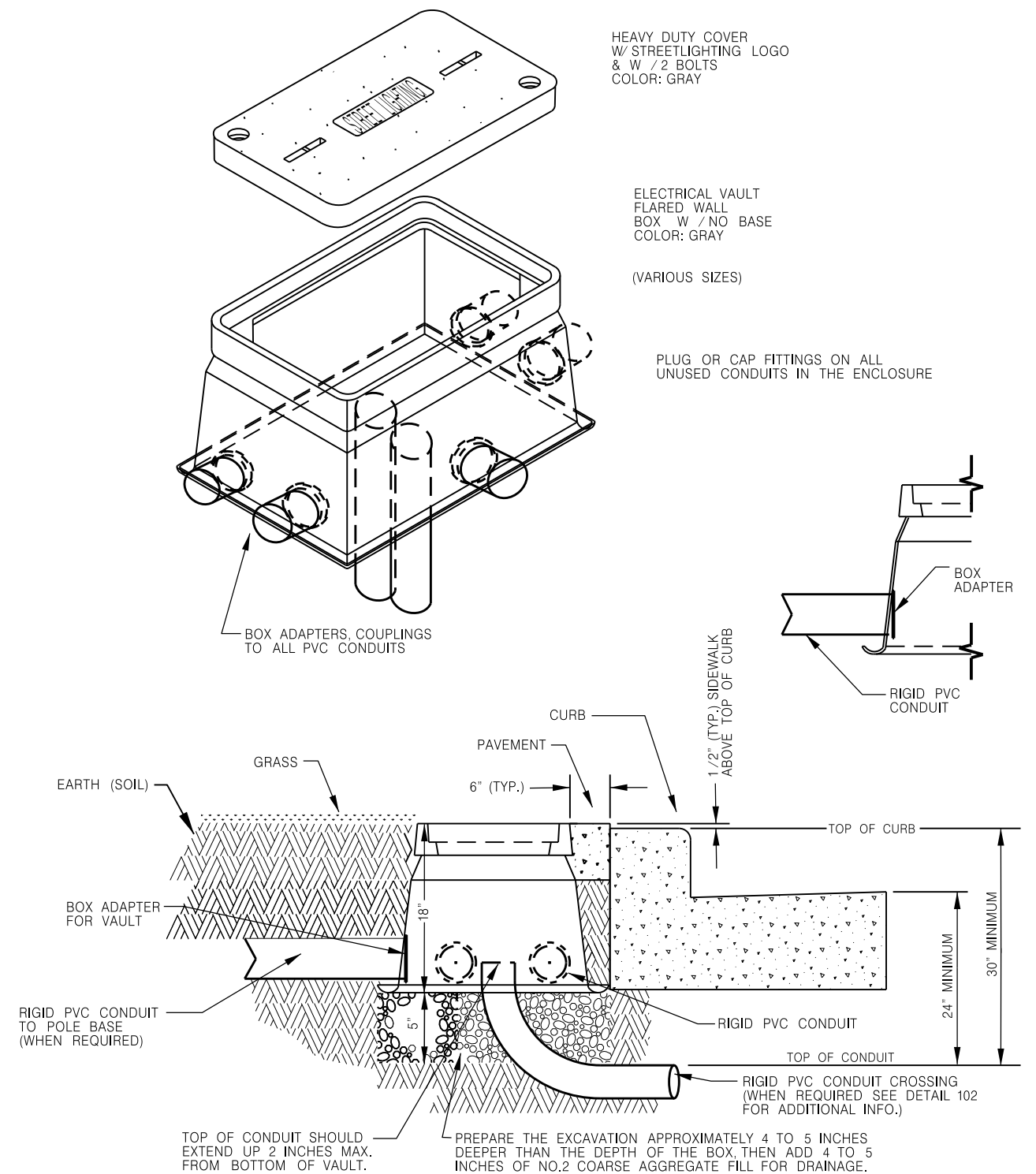
109

DETAIL

NOT TO SCALE

TYPICAL CONDUIT INSTALLATION
FROM VAULT TO SIGNAL STANDARD
AND TYPICAL BASE INSTALLATION

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM TRAFFIC & LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.



112

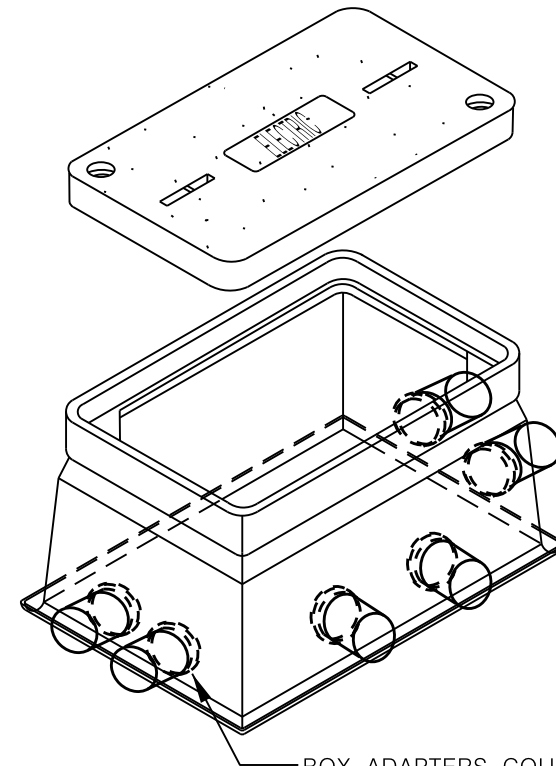
DETAIL

NOT TO SCALE

TYPICAL VAULT INSTALLATION IN EITHER
PAVEMENT OR GRASS AREAS

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

SHEET 7 OF 10

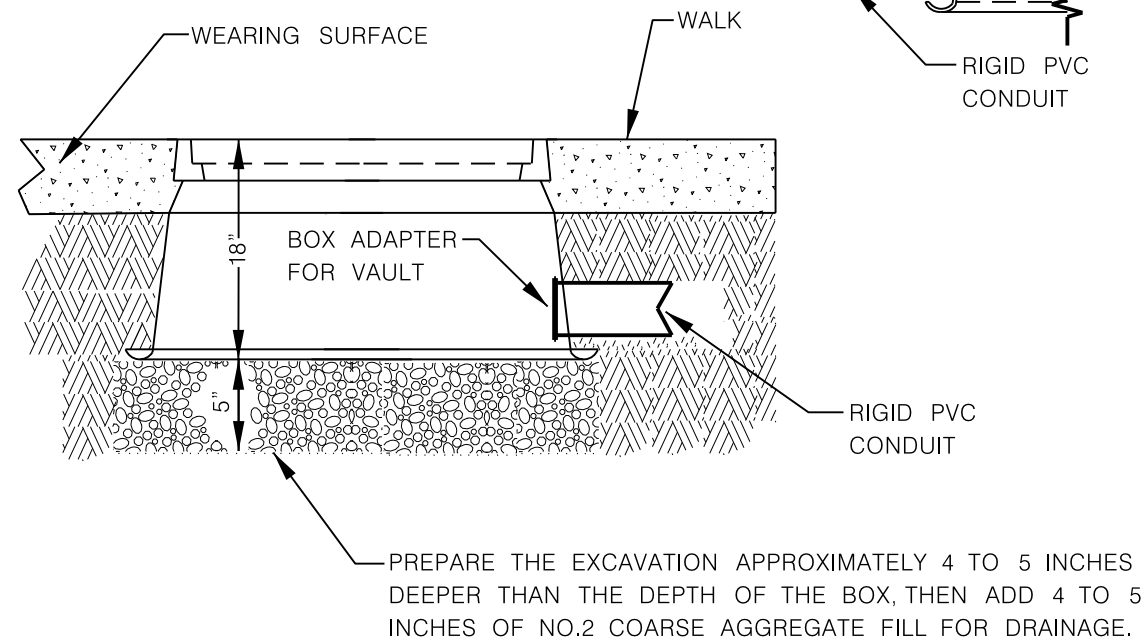
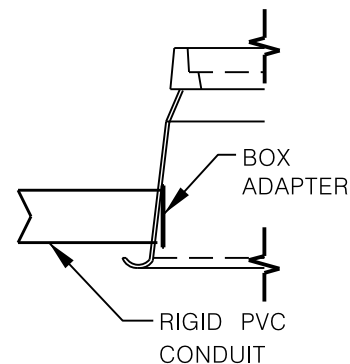


HEAVY DUTY COVER
W/ ELECTRIC LOGO
& W / 2 BOLTS
COLOR: GRAY

ELECTRICAL VAULT
FLARED WALL
BOX W / NO BASE
COLOR: GRAY
(VARIOUS SIZES)

PLUG OR CAP FITTINGS ON ALL
UNUSED CONDUITS IN THE ENCLOSURE

BOX ADAPTERS, COUPLINGS
TO ALL PVC CONDUITS



113

DETAIL

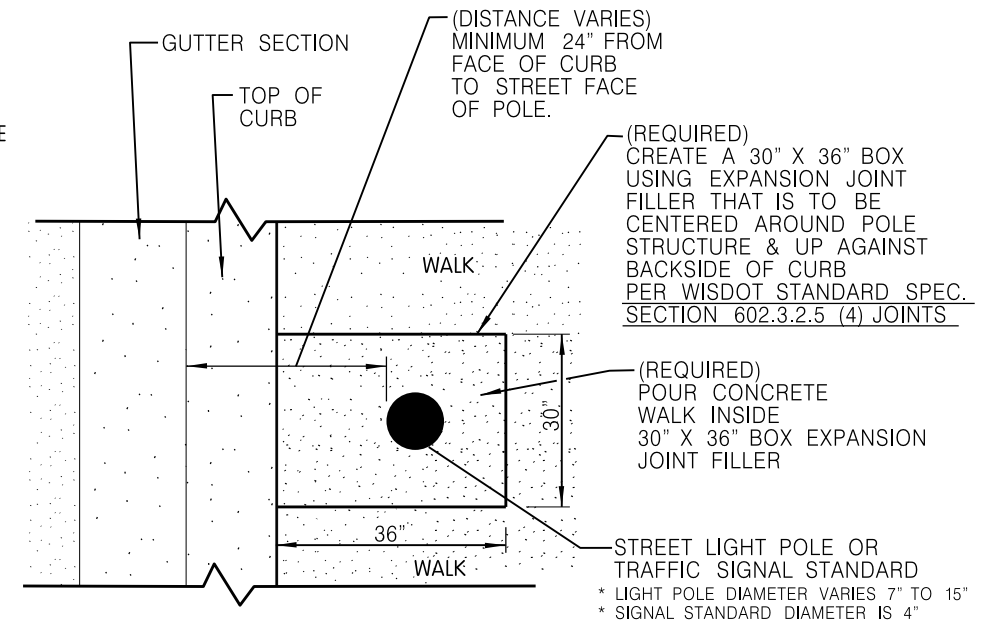
TYPICAL VAULT INSTALLATION
IN SIDEWALK

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

THE CONTRACTOR IS REQUIRED
TO INSTALL EXPANSION JOINT
FILLER INTO THE CONCRETE WALK,
WHICH SHALL BE 1/2" WIDE
MINIMUM TO BE USED TO CREATE
A SEPARATION BETWEEN A SMALL
CONCRETE AREA AROUND THE
TRAFFIC & STREET LIGHTING
FACILITIES AND THE REST OF THE
CONCRETE WALK.

THE BOX SIZE OF THE AREA
CREATED USING THE
EXPANSION JOINT FILLER IS
STANDARD AROUND LIGHT POLES
AND TRAFFIC SIGNALS, BUT WILL
VARY WHEN PLACED AROUND
TRAFFIC & LIGHTING CONTROL
CABINETS.



DETAIL VERSION #1

122

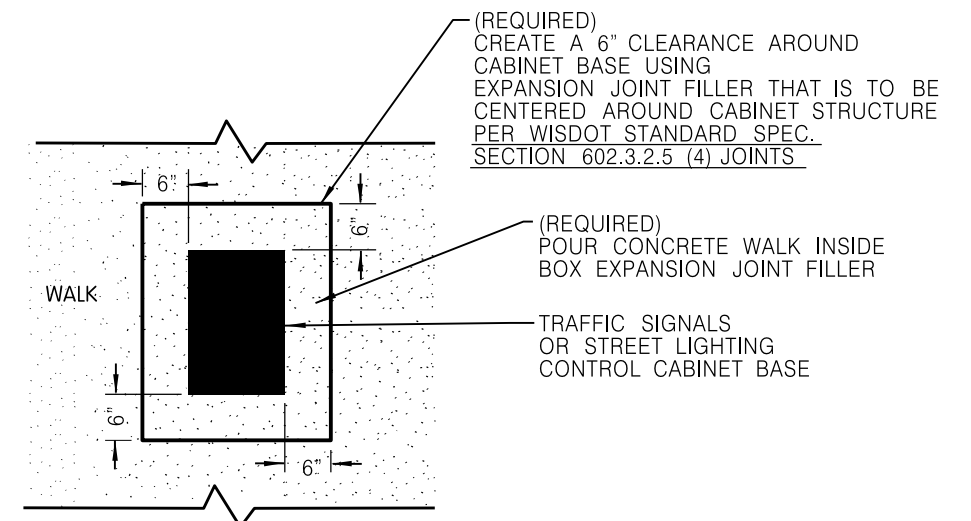
TYPICAL 30" X 36" BOX EXPANSION JOINT FILLER
AROUND STREET LIGHTING POLE OR
TRAFFIC SIGNAL STANDARD

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

THE CONTRACTOR IS REQUIRED
TO INSTALL EXPANSION JOINT
FILLER INTO THE CONCRETE WALK,
WHICH SHALL BE 1/2" WIDE
MINIMUM TO BE USED TO CREATE
A SEPARATION BETWEEN A SMALL
CONCRETE AREA AROUND THE
TRAFFIC & STREET LIGHTING
FACILITIES AND THE REST OF THE
CONCRETE WALK.

THE BOX SIZE OF THE AREA
CREATED USING THE
EXPANSION JOINT FILLER IS
STANDARD AROUND LIGHT POLES
AND TRAFFIC SIGNALS, BUT WILL
VARY WHEN PLACED AROUND
TRAFFIC & LIGHTING CONTROL
CABINETS.



DETAIL VERSION #2

122

TYPICAL BOX EXPANSION JOINT FILLER
AROUND TRAFFIC SIGNAL
OR STREET LIGHTING CONTROL CABINET

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

SHEET 8 OF 10

2

A diagram of a cell with a dashed line indicating the nucleus. The cell is represented by a large circle with a thick black border. Inside the circle, there is a dashed line forming an irregular shape, representing the nucleus. The area inside the nucleus is filled with a stippled pattern. The area outside the nucleus but inside the cell is also filled with a stippled pattern. There are three small circles, representing vacuoles, located in the lower right quadrant of the cell. One of these circles is labeled with a line pointing to it from the text 'vacuole' in the adjacent column.

-STUB UP 2" RIGID
PVC CONDUIT
(TRAFFIC SIGNALS).
WHEN REQUIRED

CYLINDRICAL FORM TOP VIEW

30" MINIMUM

1 1/2" (TYP.) SIDEWALK ABOVE TOP OF CURB

CURB

" (~~TYP.~~)

8"

INSTALL CONDUIT
THRU TUBE WALL
16 TO 18 INCHES
BELOW FINISHED
GRADE.

TOP OF PIPE NO MORE
THEN 4" ABOVE THE
BOTTOM OF VAULT

BOX ADAPTER
FOR VAULT

6 FOOT LONG
FIBER PULPBOARD TUBE
(CYLINDRICAL FORM)
WITH MOISTURE RESISTANT
POLY KRAFT LINER

DETAIL

138

TYPICAL CONDUIT INSTALLATION
FROM VAULT TO CYLINDRICAL FORM

NOT TO SCALE

EXAMPLE - CONCRETE LOADING ZONE

SEE
INSTALLATION
DETAIL

SEE
INSTALLATION
DETAIL

NOTE :
SIZE AND LOCATION OF CITY OF MILWAUKEE
ELECTRICAL SERVICES BOXOUTS IN CONCRETE
ISLANDS ON BASE TO BE DETERMINED IN FIELD
AT THE TIME OF CONSTRUCTION

SEE
INSTALLATION
DETAIL

SECTION A - A

— DOWEL BARS
ADJUST AS NEEDED

(REQUIRED)
FULL DEPTH FORM
PER WISDOT STANDARD SPEC.
SECTION 602.3.2.2 FORMS

(REQUIRED)
FULL DEPTH FORM
PER WISDOT STANDARD SPEC.
SECTION 602.3.2.2 FORMS

FULL DEPTH FORM NOTE

TYPICAL 30" X 36" BOX FORM
AROUND STREET LIGHTING POLE OR
TRAFFIC SIGNAL STANDARD

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

NOT TO SCALE

SHEET 9 OF 10

2

SHEET	79
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FILE NAME : W:\bes\pavings\2015work\s13th St – Windlake to Forest Home\s13th St – Windlake to Forest Home Conduit & Vault.dgn

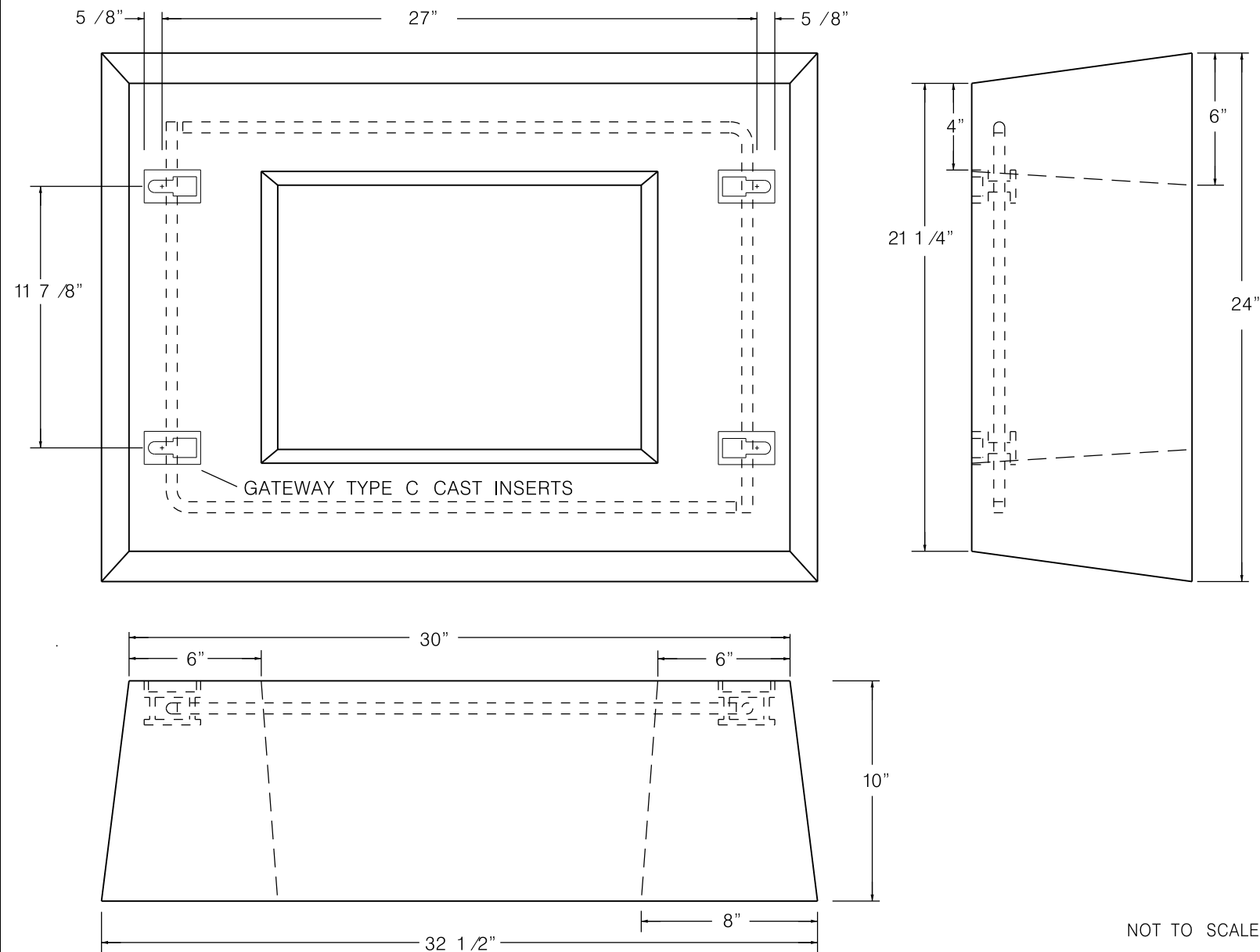
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PLOT BY : dkozel

PLOT NAME

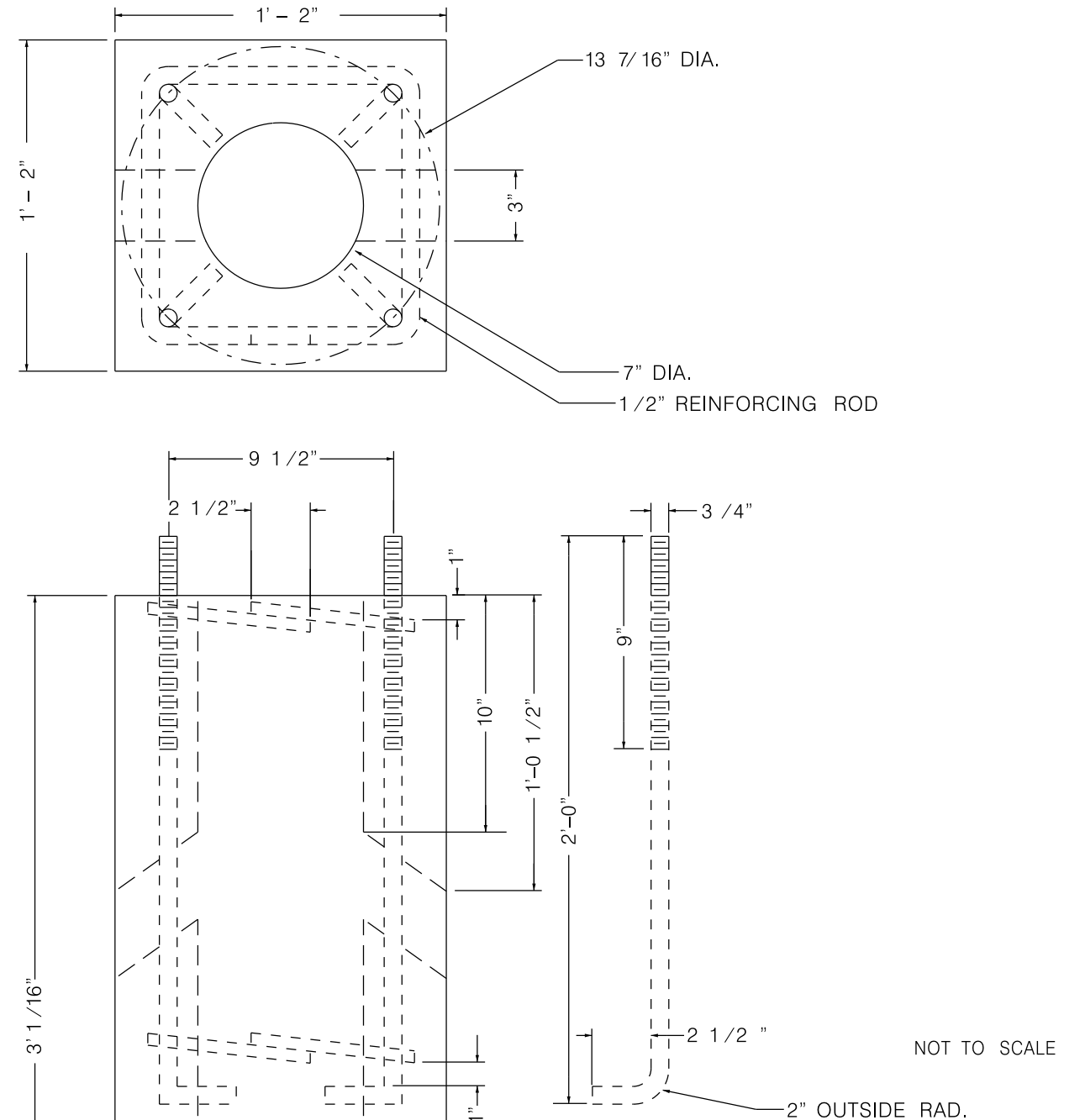
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WISDOT/CADDS SHEET 42



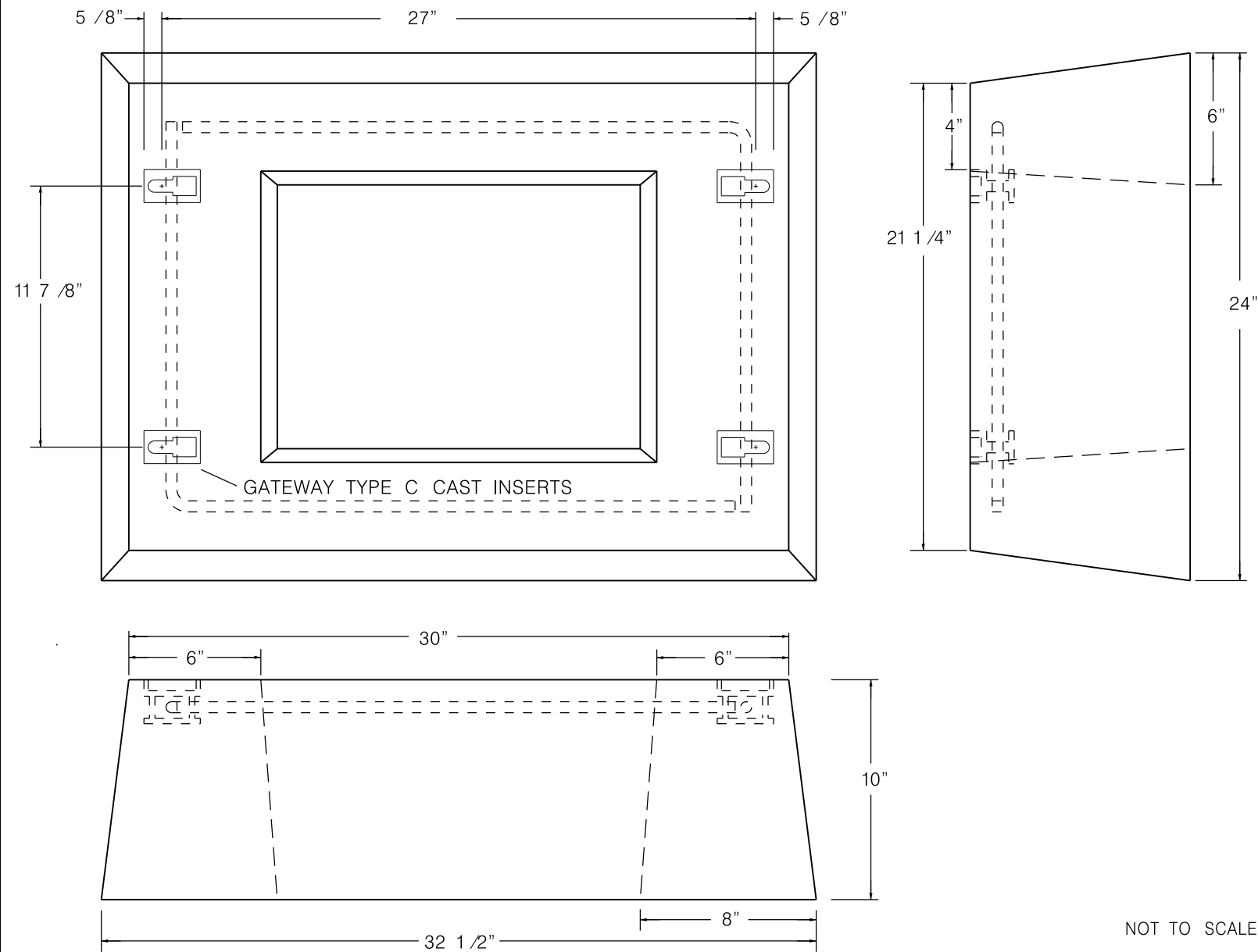
6 BAG MIX #1 STONE

COMM. CODE 1238-927				
CONCRETE FOUNDATION				
TRAFFIC SIGNAL CONTROL CABINET				
BUREAU OF TRAFFIC ENGINEERING				
AND				
ELECTRICAL SERVICES				
D.P.W. CITY OF MILWAUKEE				
TRAFFIC CONTROL MATERIAL				
DATE 4-22-75	SCALE 1/4" = 1"	DRAWN J.H.S.	CHECKED B.J.T.	APPROVED R.J.B.
SUPERSEDES C-65-546-T	REVISED DATE 01-30-02	DRG. C-75-564-T		
SUPERSEDED BY	NEW DRG.	F-82-536-T		



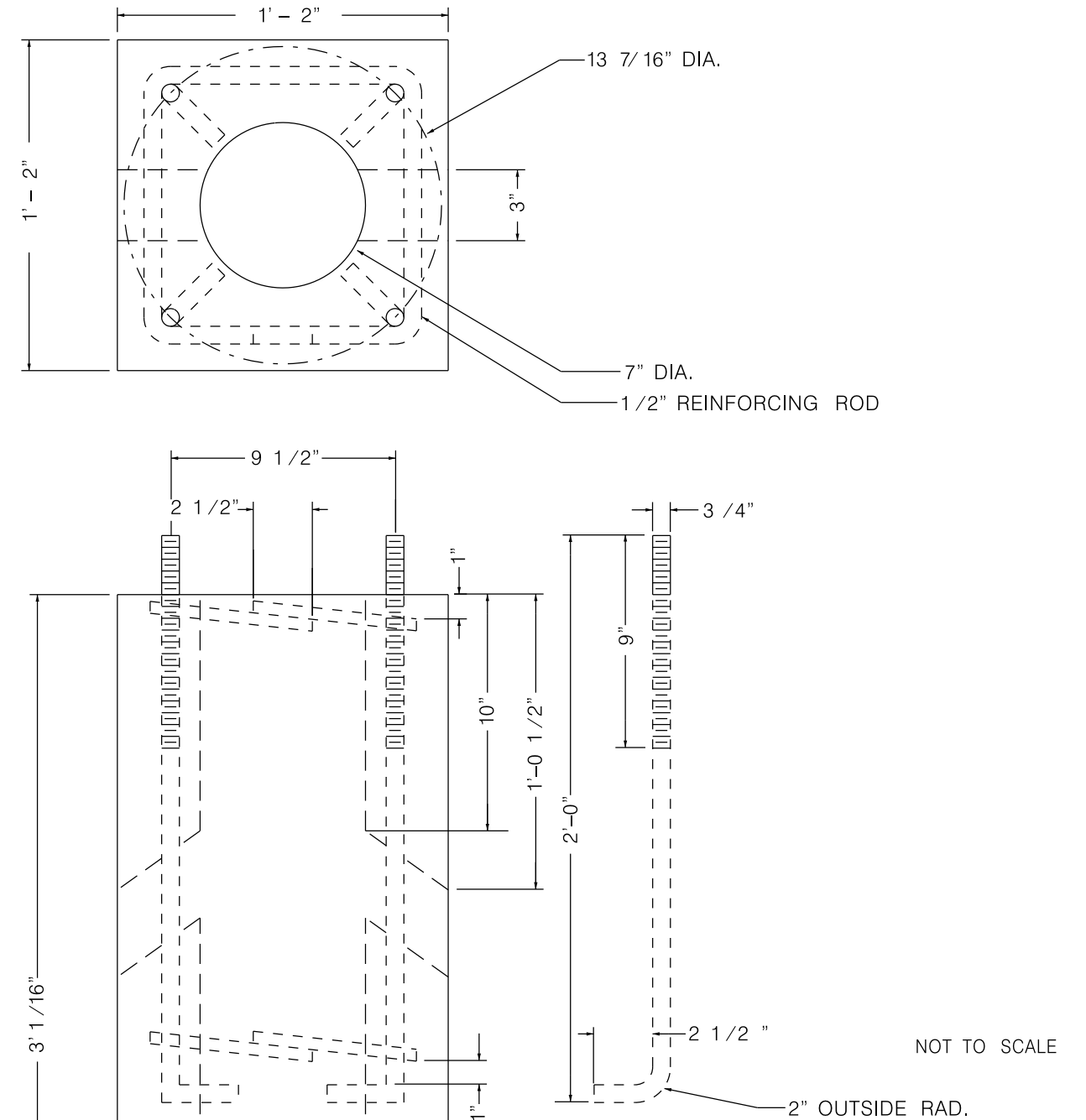
6 BAG MIX #1 STONE

COMM. CODE 1238-936				
CONCRETE FOUNDATION				
TRAFFIC SIGNAL STANDARD				
BUREAU OF TRAFFIC ENGINEERING				
AND				
ELECTRICAL SERVICES				
D.P.W. CITY OF MILWAUKEE				
TRAFFIC CONTROL MATERIAL				
DATE 4-18-75	SCALE Not To Scale	DRAWN J.H.S.	CHECKED B.J.T.	APPROVED R.J.B.
SUPERSEDES	REVISED DATE 07-29-03	DRG. C-75-563-T		
SUPERSEDED BY	NEW DRG.	F-82-535-T		



6 BAG MIX #1 STONE

COMM. CODE 1238-927				
CONCRETE FOUNDATION				
TRAFFIC SIGNAL CONTROL CABINET				
BUREAU OF TRAFFIC ENGINEERING				
AND				
ELECTRICAL SERVICES				
D.P.W. CITY OF MILWAUKEE				
TRAFFIC CONTROL MATERIAL				
DATE 4-22-75	SCALE 1/4" = 1"	DRAWN J.H.S.	CHECKED B.J.T.	APPROVED R.J.B.
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SUPERSEDED BY	NEW DRG.	F-82-536-T		



6 BAG MIX #1 STONE

COMM. CODE 1238-936				
CONCRETE FOUNDATION				
TRAFFIC SIGNAL STANDARD				
BUREAU OF TRAFFIC ENGINEERING				
AND				
ELECTRICAL SERVICES				
D.P.W. CITY OF MILWAUKEE				
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DATE 4-18-75	SCALE Not To Scale	DRAWN J.H.S.	CHECKED B.J.T.	APPROVED R.J.B.
SUPERSEDES	REVISED DATE 07-29-03	DRG. C-75-563-T		
SUPERSEDED BY	NEW DRG.	F-82-535-T		



NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGULAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, BUT WHEN IT IS NOT POSSIBLE A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS, AND FIRE HYDRANTS SHOULD BE USED.

CONDUIT END CAPS REQUIRED ON ALL EMPTY CONDUIT.

LOCATIONS THAT HAVE DETAIL NOTE "105" ARE AREAS THAT ARE BOXED OUT AND FILLED WITH A 4" THICK ASPHALTIC SURFACE TEMPORARY UNDER BID #465.0125

PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

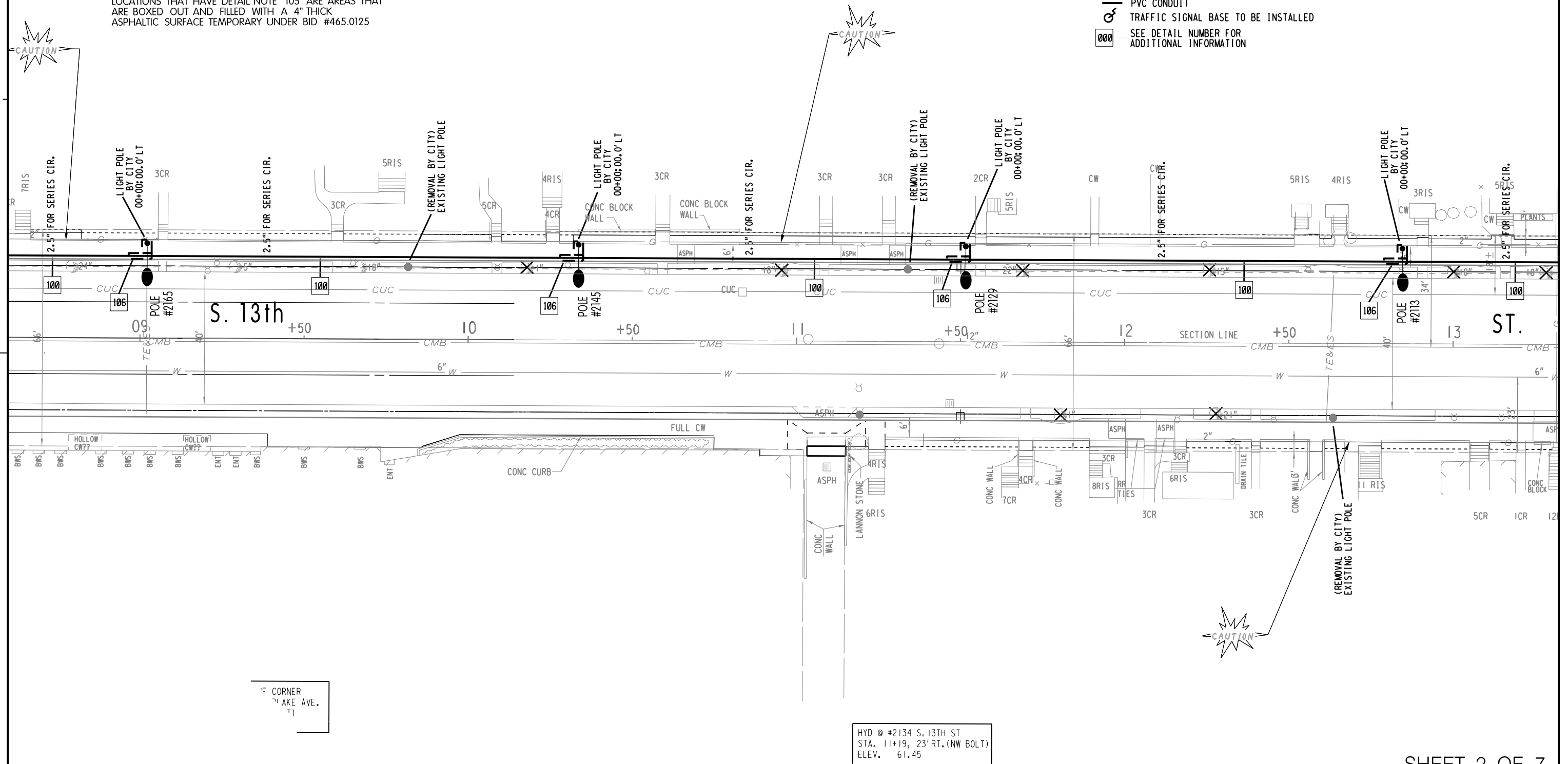
ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

LEGEND

- EXISTING STREET LIGHT POLE
- PROPOSED STREET LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION



SHEET 2 OF 7

SCALE, FEET 0 30

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGULAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, BUT WHEN IT IS NOT POSSIBLE A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS, AND FIRE HYDRANTS SHOULD BE USED.

CONDUIT END CAPS REQUIRED ON ALL EMPTY CONDUIT.

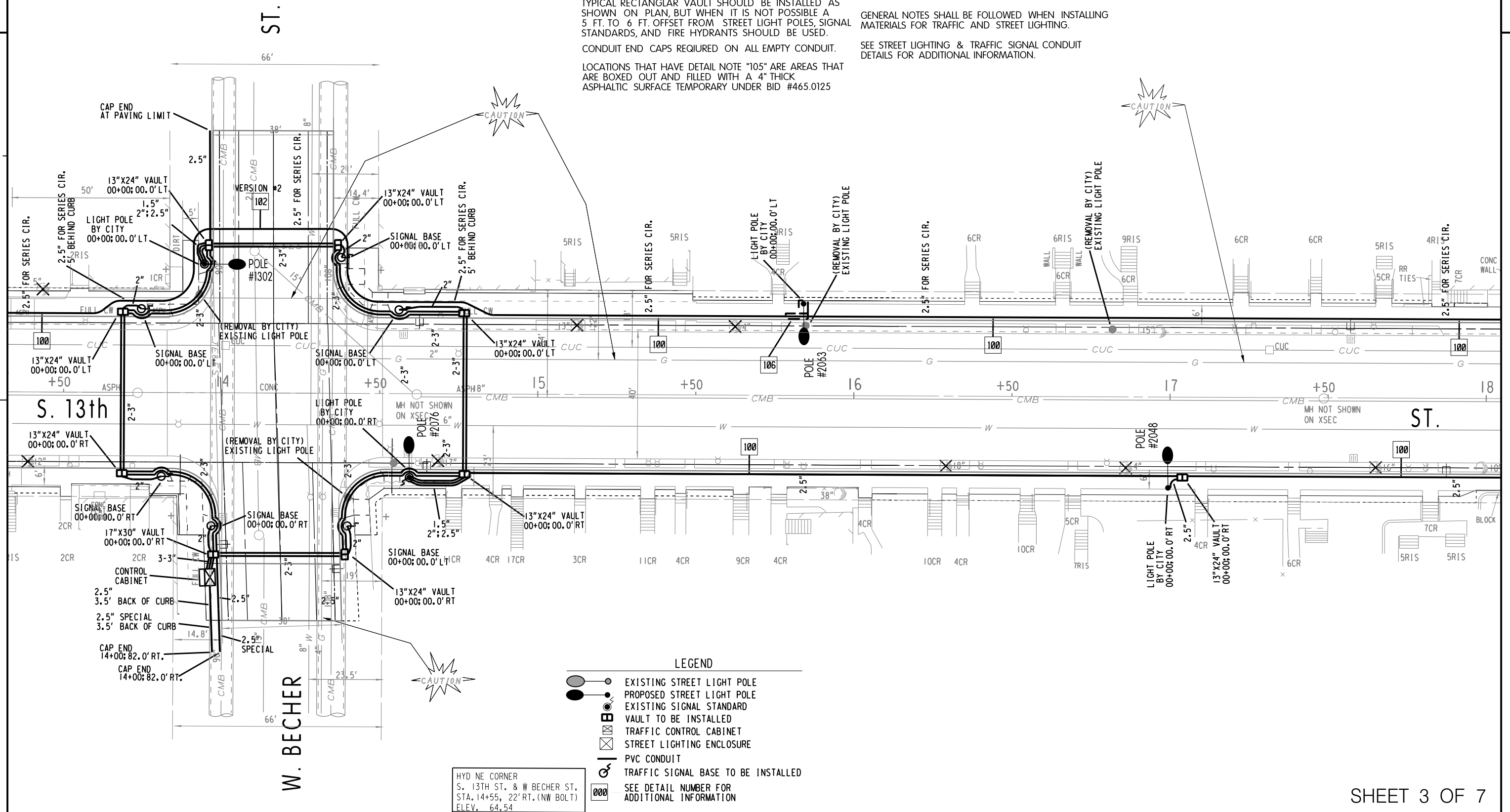
LOCATIONS THAT HAVE DETAIL NOTE "105" ARE AREAS THAT ARE BOXED OUT AND FILLED WITH A 4" THICK ASPHALTIC SURFACE TEMPORARY UNDER BID #465.0125

PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

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SEE STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- EXISTING STREET LIGHT POLE
- PROPOSED STREET LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

HYD NE CORNER
S. 13TH ST. & W BECHER ST.
STA. 14+55, 22' RT. (NW BOLT)
ELEV. 64.54

SHEET 3 OF 7

SCALE, FEET

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGULAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, BUT WHEN IT IS NOT POSSIBLE A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS, AND FIRE HYDRANTS SHOULD BE USED.

CONDUIT END CAPS REQUIRED ON ALL EMPTY CONDUIT.

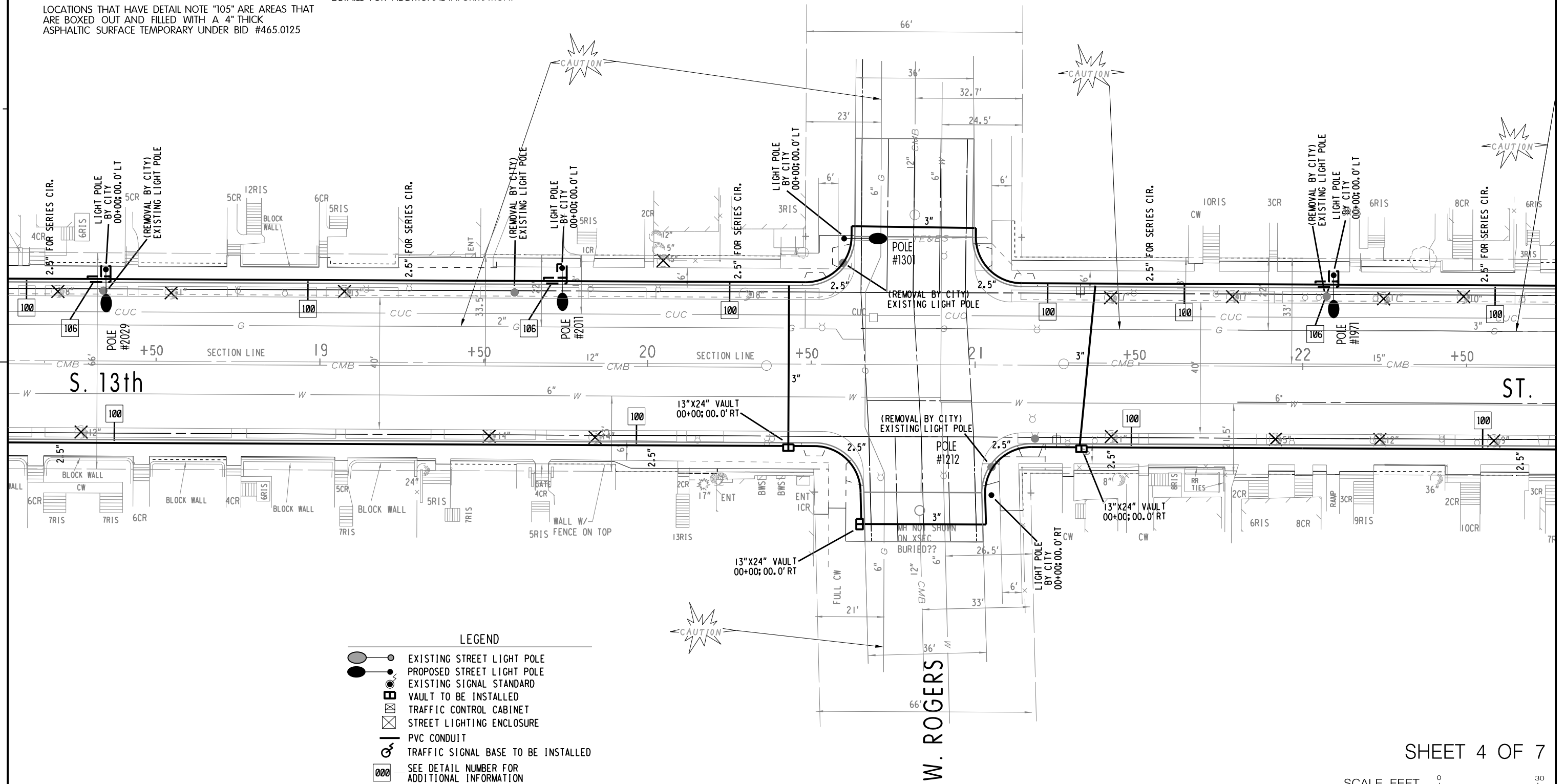
LOCATIONS THAT HAVE DETAIL NOTE "105" ARE AREAS THAT ARE BOXED OUT AND FILLED WITH A 4" THICK ASPHALTIC SURFACE TEMPORARY UNDER BID #465.0125

PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



SHEET 4 OF 7

SCALE, FEET 0 30

BM: HYD NE CORNER OF
S. 13TH ST. & W. ROGERS ST.
STA. 21+10.00 (SEE PLAN)

BM: HYD NE
S. 13TH ST.

PROJECT NO: 2505-00-75

HWY: LOCAL STREET

COUNTY: MILWAUKEE

STREET LIGHTING & TRAFFIC SIGNAL PLAN

SHEET 85

E

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGULAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, BUT WHEN IT IS NOT POSSIBLE A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS, AND FIRE HYDRANTS SHOULD BE USED.

CONDUIT END CAPS REQUIRED ON ALL EMPTY CONDUIT.

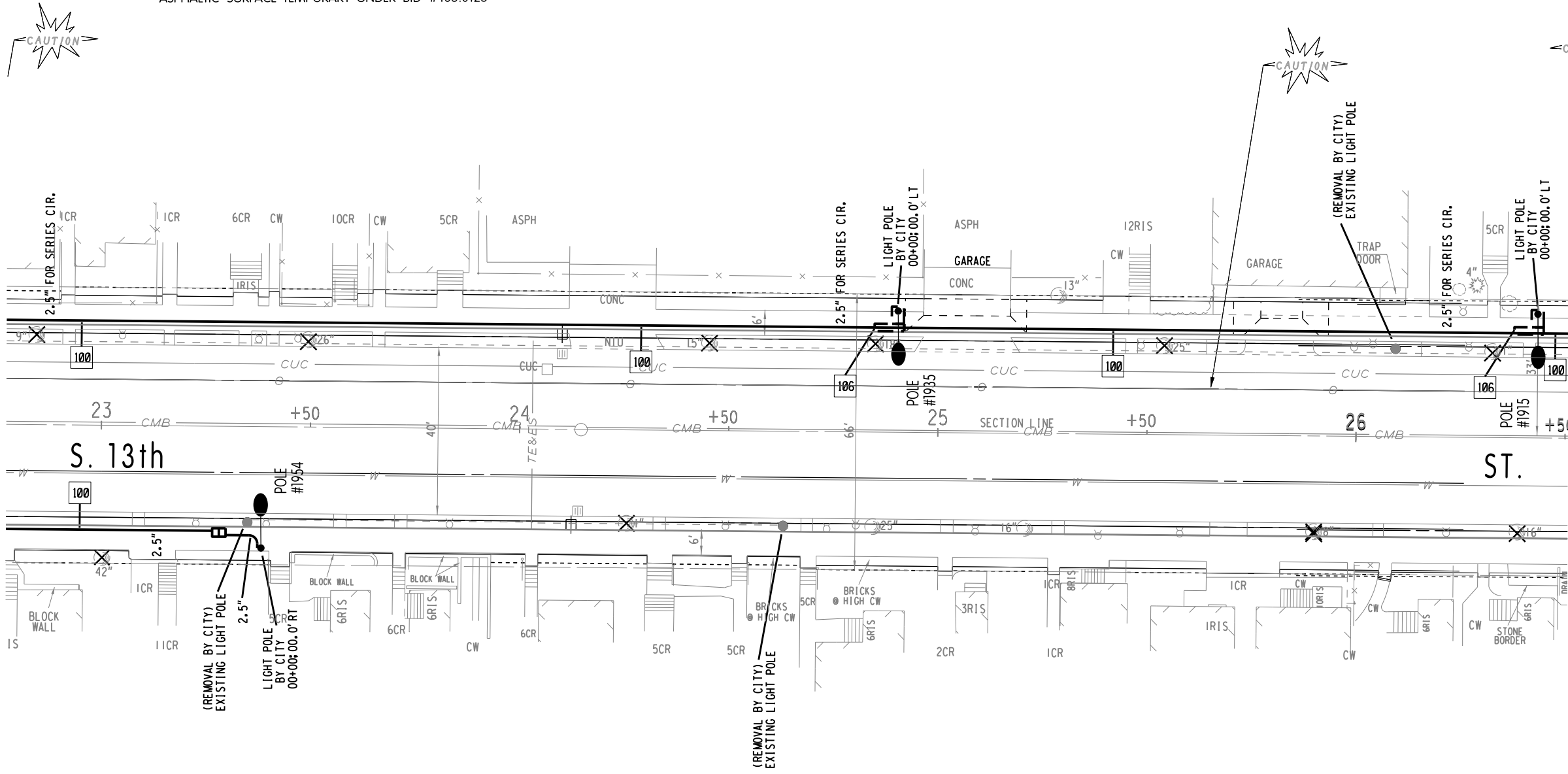
LOCATIONS THAT HAVE DETAIL NOTE "105" ARE AREAS THAT ARE BOXED OUT AND FILLED WITH A 4" THICK ASPHALTIC SURFACE TEMPORARY UNDER BID #465.0125

PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- EXISTING STREET LIGHT POLE
- PROPOSED STREET LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

CORNER OF
S. & W. ROGERS ST.

SHEET 5 OF 7

SCALE, FEET 0 30

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGULAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, BUT WHEN IT IS NOT POSSIBLE A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS, AND FIRE HYDRANTS SHOULD BE USED.

CONDUIT END CAPS REQUIRED ON ALL EMPTY CONDUIT.

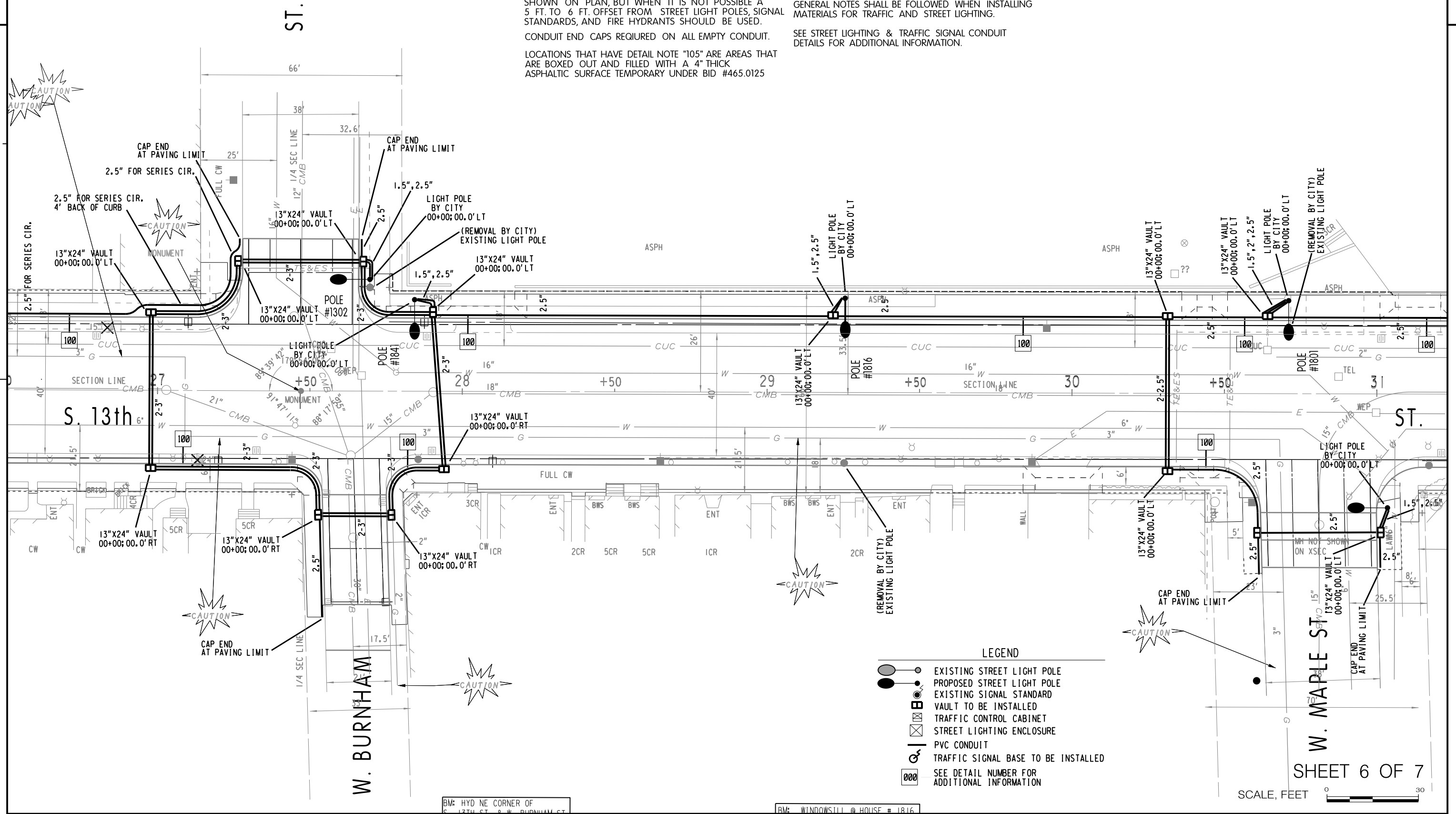
LOCATIONS THAT HAVE DETAIL NOTE "105" ARE AREAS THAT ARE BOXED OUT AND FILLED WITH A 4" THICK ASPHALTIC SURFACE TEMPORARY UNDER BID #465.0125

PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



BM: HYD NE CORNER OF
C 13TH ST & W BURNHAM ST

BM: WINDOWSILL @ HOUSE # 1816

PROJECT NO: 2505-00-75

HWY: LOCAL STREET

COUNTY: MILWAUKEE

STREET LIGHTING & TRAFFIC SIGNAL PLAN

SHEET

87

E

2

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION
WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGULAR VAULT SHOULD BE INSTALLED AS
SHOWN ON PLAN, BUT WHEN IT IS NOT POSSIBLE A
5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL
STANDARDS, AND FIRE HYDRANTS SHOULD BE USED.

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LOCATIONS THAT HAVE DETAIL NOTE "105" ARE AREAS THAT
ARE BOXED OUT AND FILLED WITH A 4" THICK
ASPHALTIC SURFACE TEMPORARY UNDER BID #465.0125

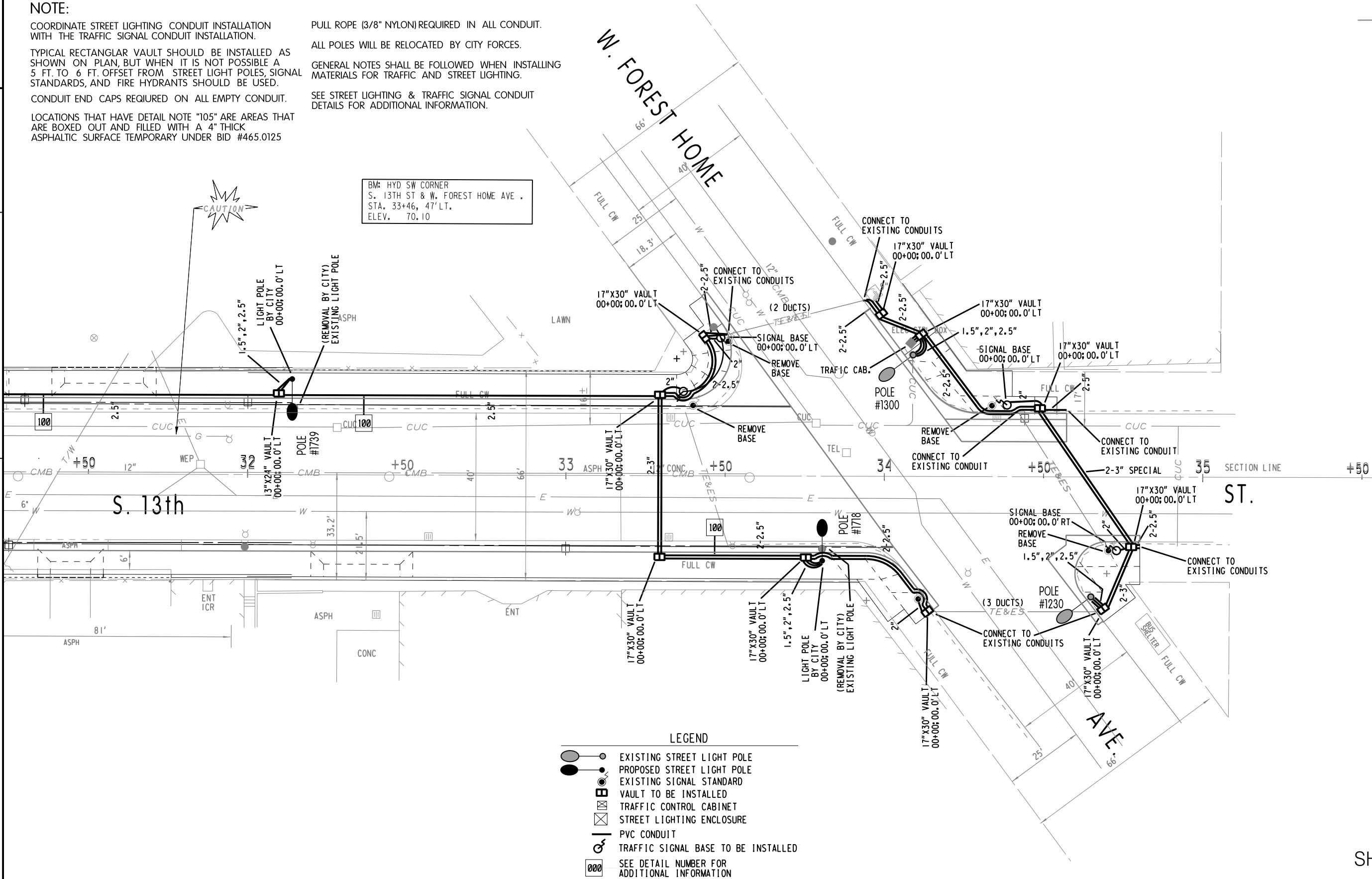
PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

2

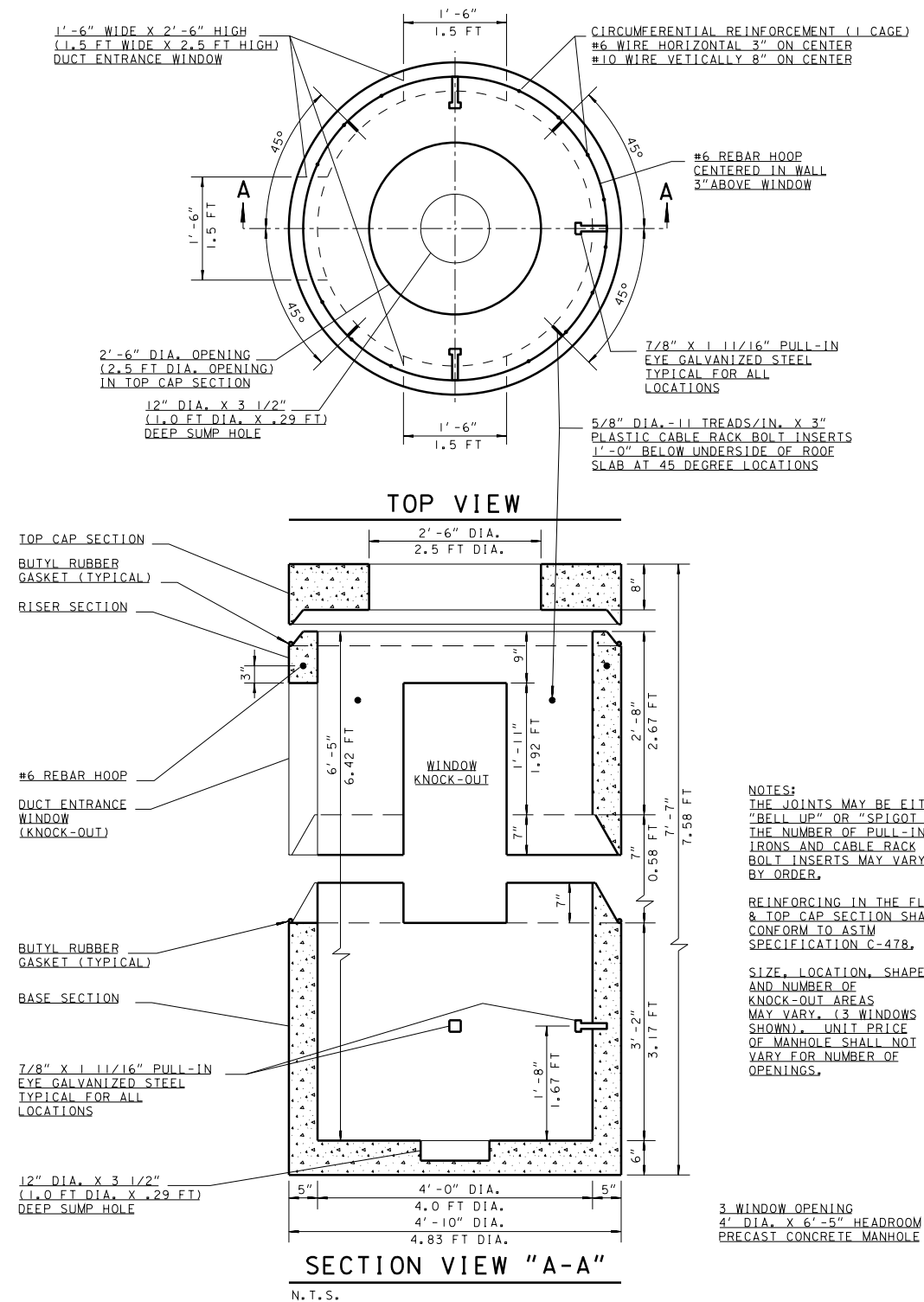


SHEET 7 OF 7

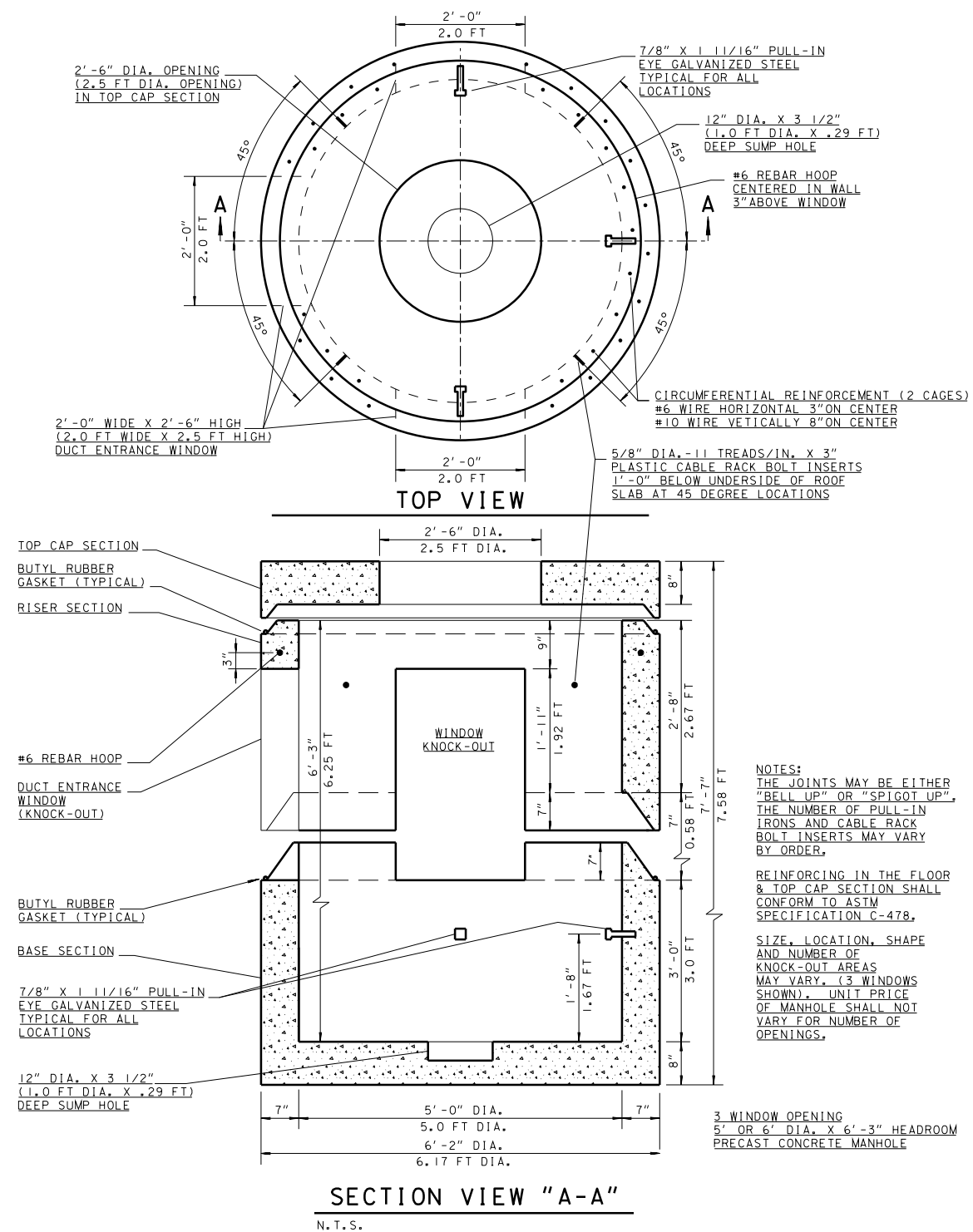
SCALE, FEET



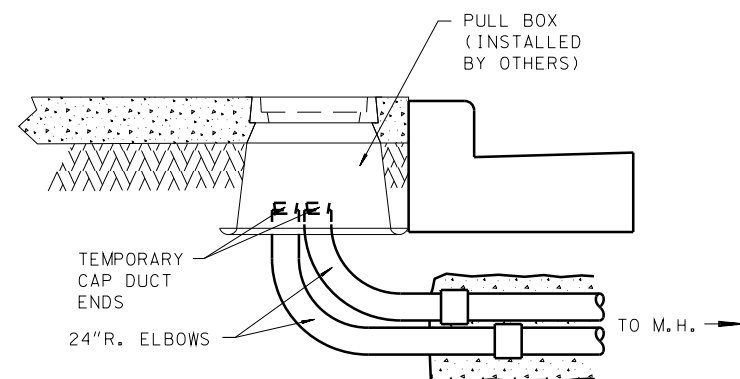
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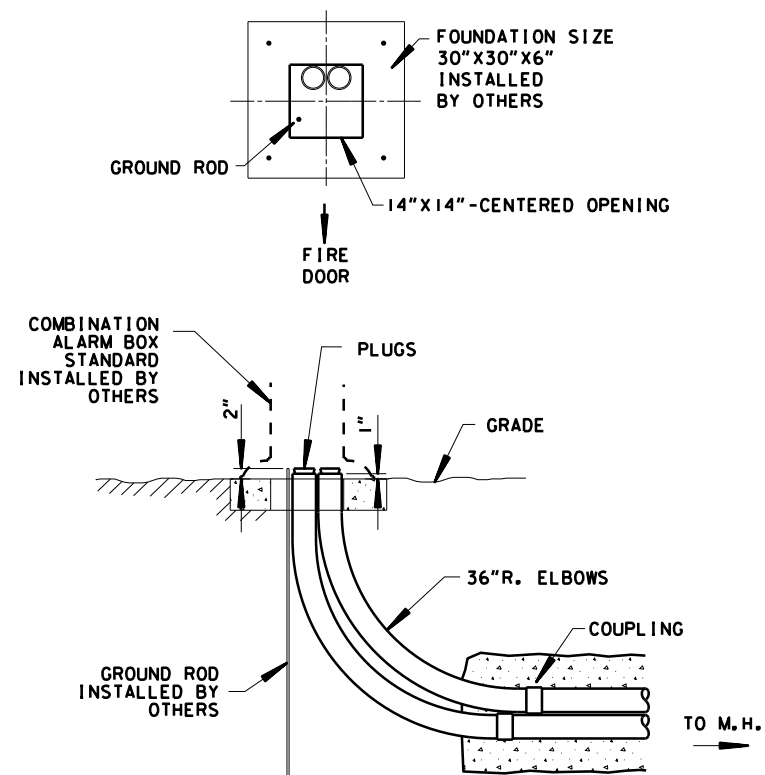
4' DIAMETER "DOGHOUSE" TYPE TES DETAIL



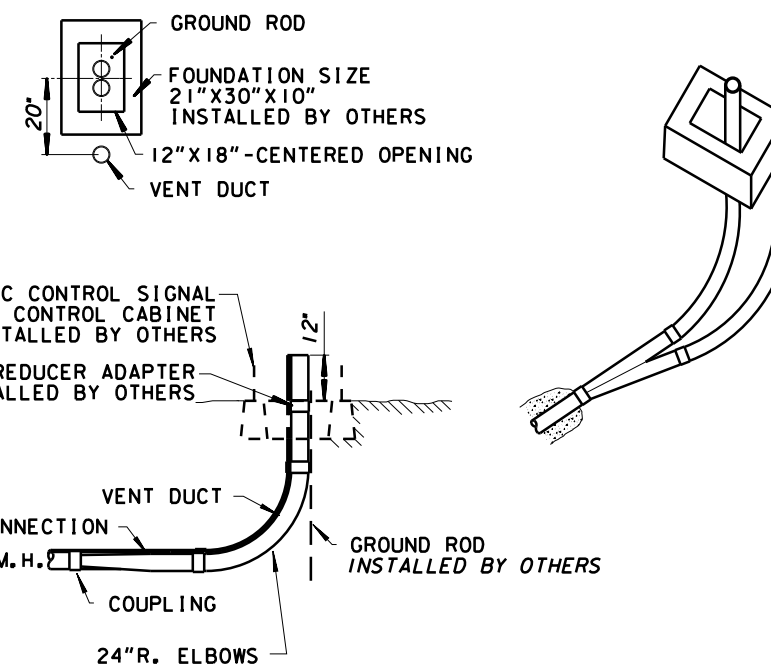
5' DIAMETER "DOGHOUSE" TYPE TES DETAIL



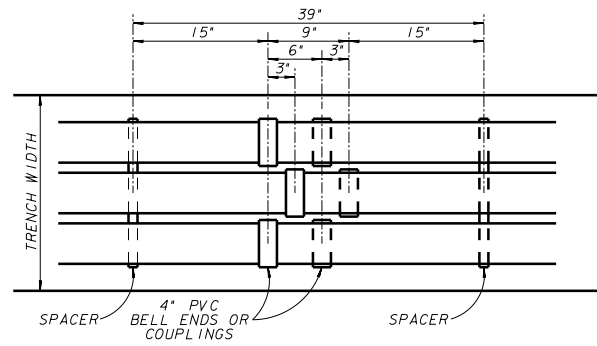
VAULT INSTALLATION DETAIL



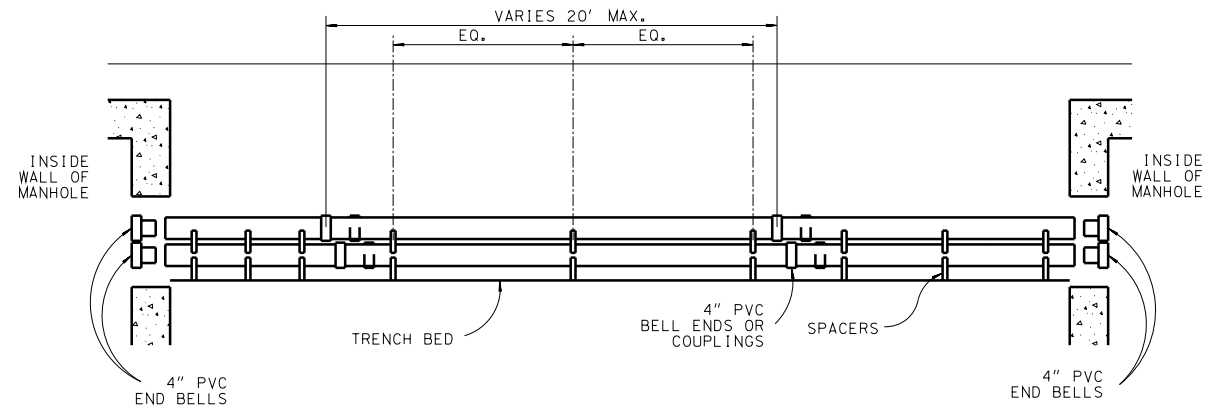
POLICE CALL BOX DETAIL



TRAFFIC CONTROL CABINET DETAIL

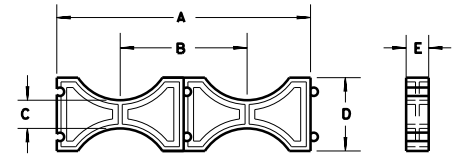


PLAN VIEW
N.T.S.



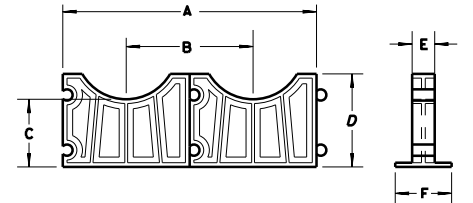
SECTION VIEW
N.T.S.

COND.	3"	4"
A	10"	11 1/2"
B	5"	5 1/2"
C	1 1/2"	1 1/2"
D	3 1/2"	3 1/2"
E	1"	1"



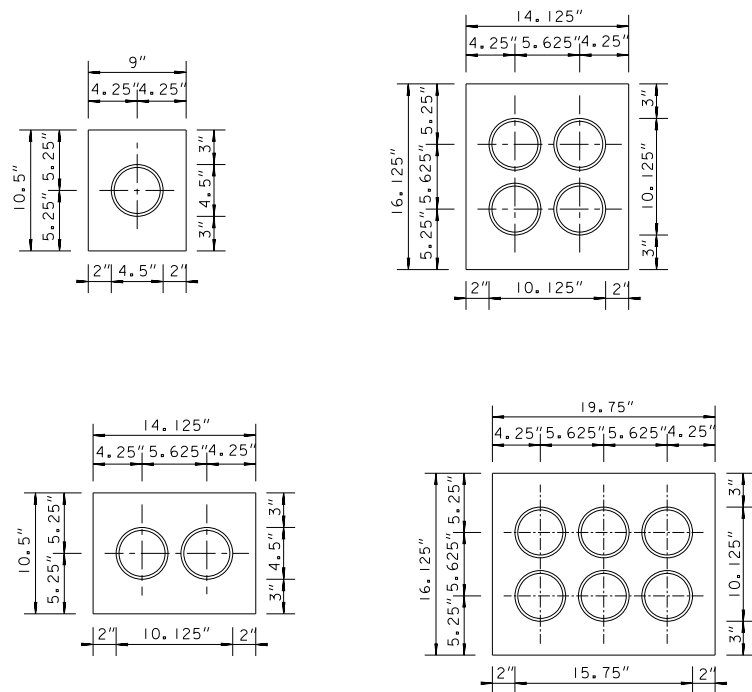
INTERMEDIATE SPACER

COND.	3"	4"
A	10"	11 1/2"
B	5"	5 1/2"
C	3"	3"
D	3 1/2"	4 1/2"
E	1"	1"
F	2 1/2"	2 1/2"

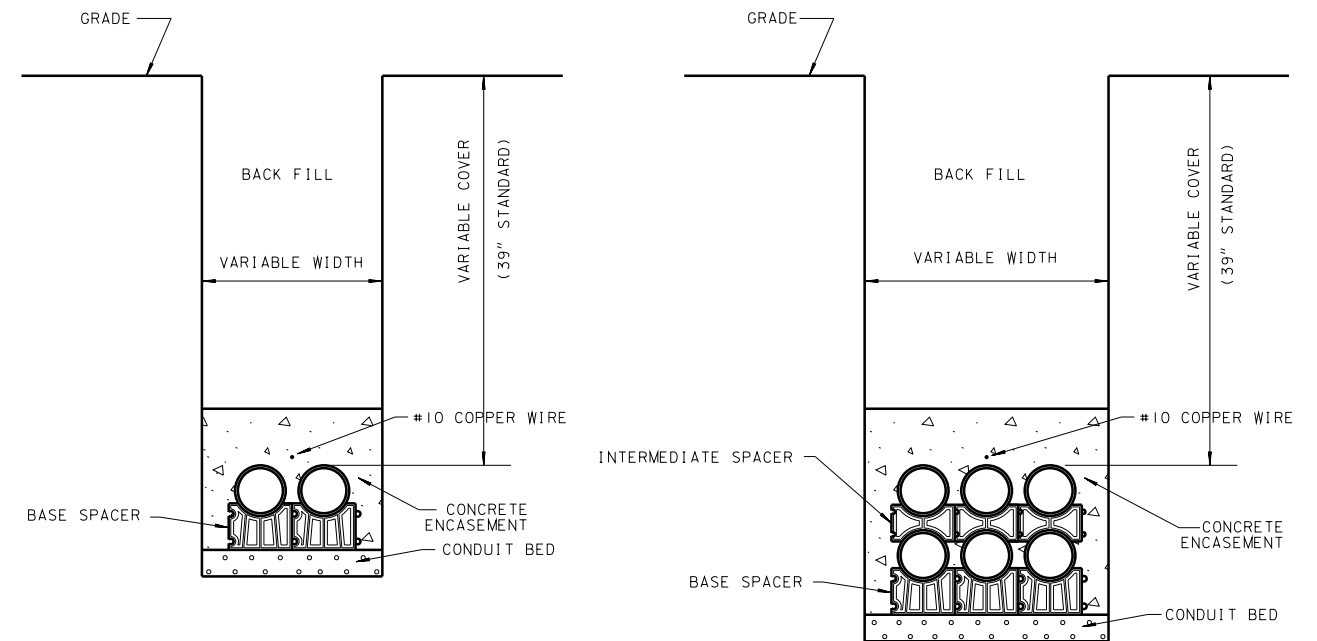


BASE SPACER

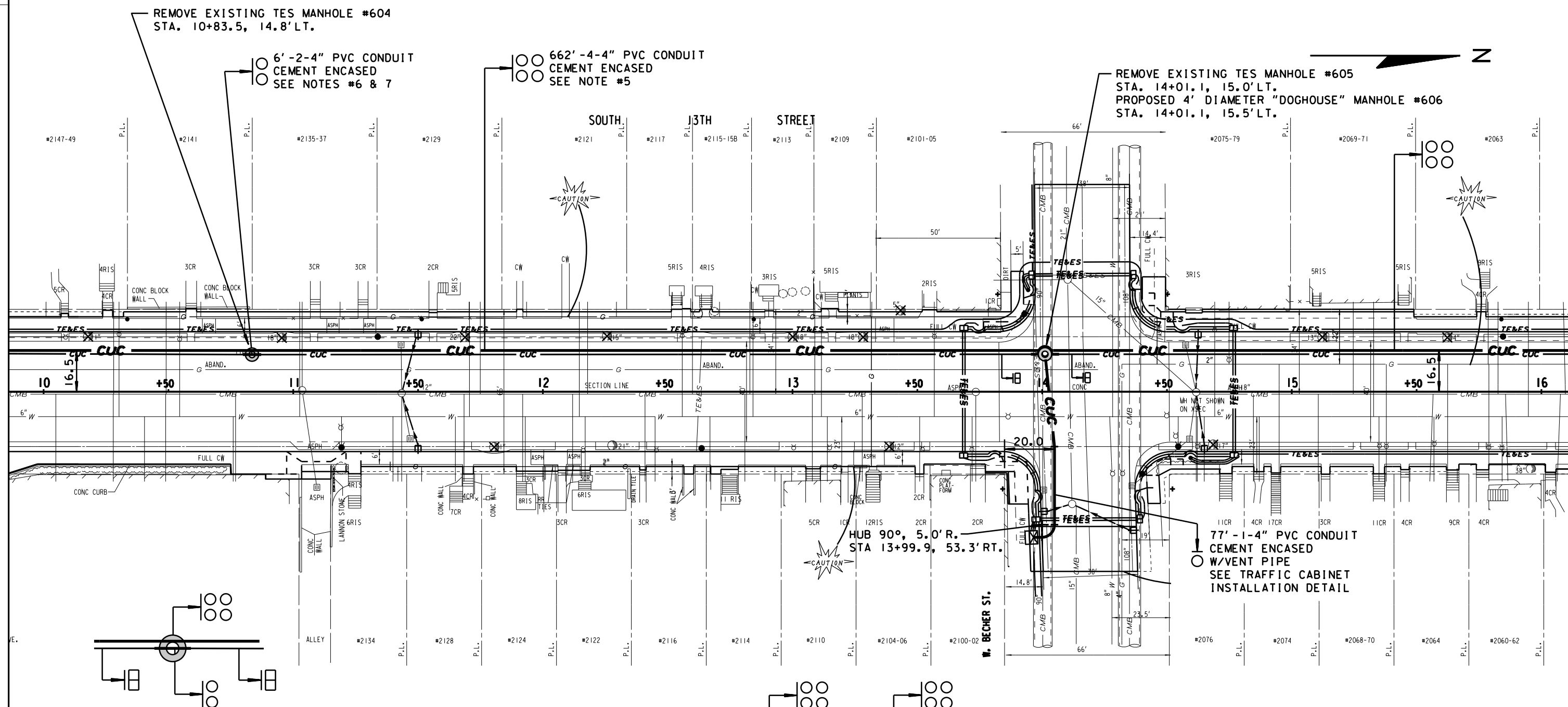
INTERMEDIATE AND BASE SPACER DETAIL



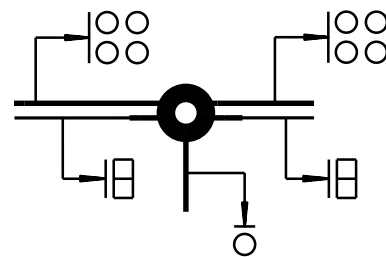
CROSS SECTION VIEW
N.T.S.



CROSS SECTION VIEW, TYP.
N.T.S.

**NOTES:**

- 1) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
- 2) THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
- 3) DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
- 4) MAINTAIN A STANDARD DEPTH OF 39-INCHES BETWEEN FINISHED GRADE AND TOP OF CONDUIT.
- 5) INSTALL PROPOSED CONDUIT ALONGSIDE EXISTING ACTIVE CONDUIT.
- 6) ATTACH PROPOSED 4" PVC TO EXISTING DUCTS (CLAY TILE) USING APPROPRIATE ADAPTOR.
- 7) USE SPLIT 4" PVC OVER EXISTING CABLES TO CONNECT CONDUIT THROUGH ABANDON MANHOLE LOCATION.
- 8) CONDUIT ENTERING AND EXITING A MANHOLE SHALL BE INSTALLED AT 180° TO EACH OTHER.

**LEGEND**

- CUC — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.
- PROPOSED TES MANHOLE
- CUC — EXISTING CONDUIT

SHEET 2 OF 9

STATE PROJECT NUMBER

HWY:

COUNTY: MILWAUKEE

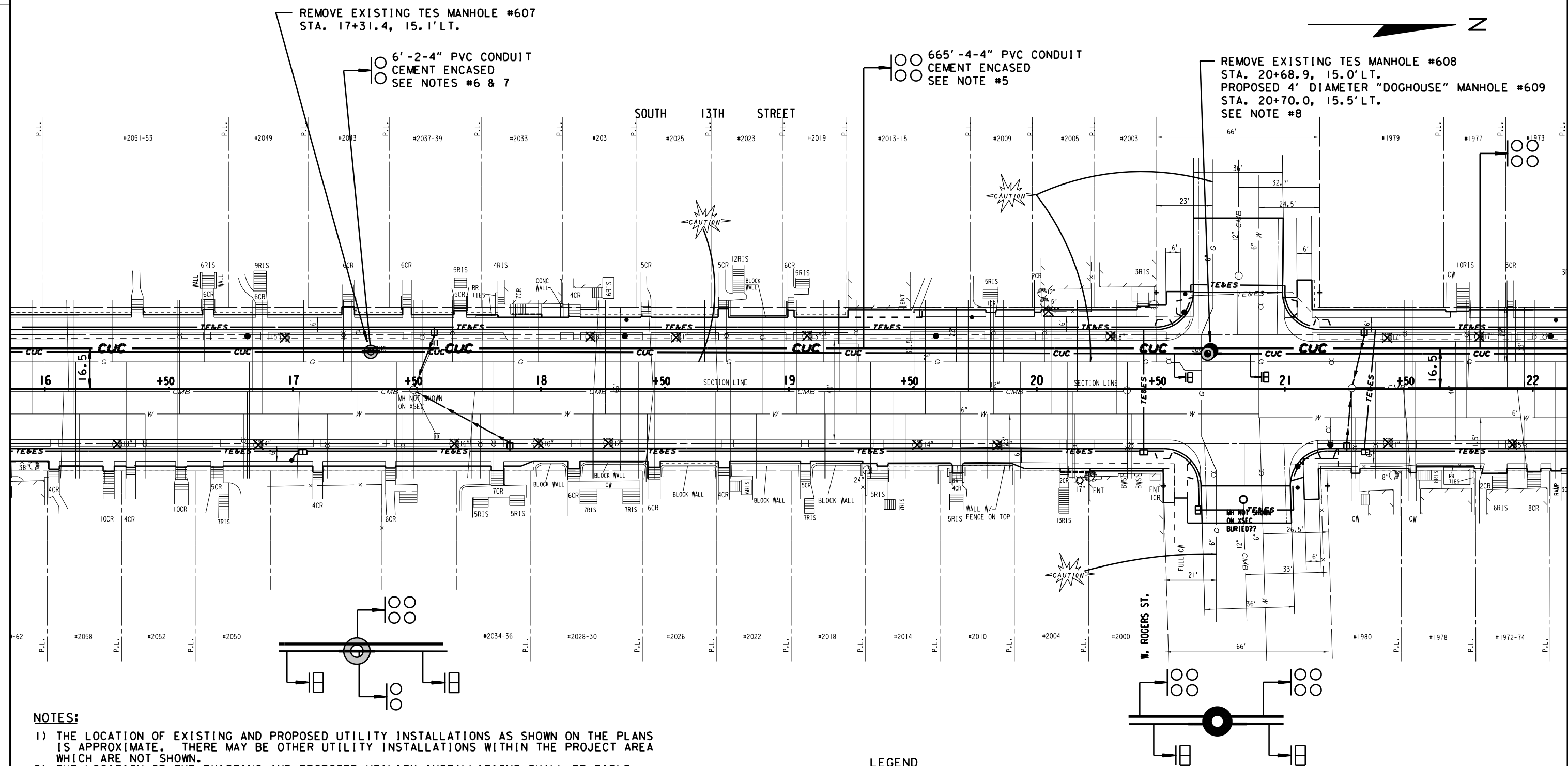
CITY UG CONDUIT (TES)

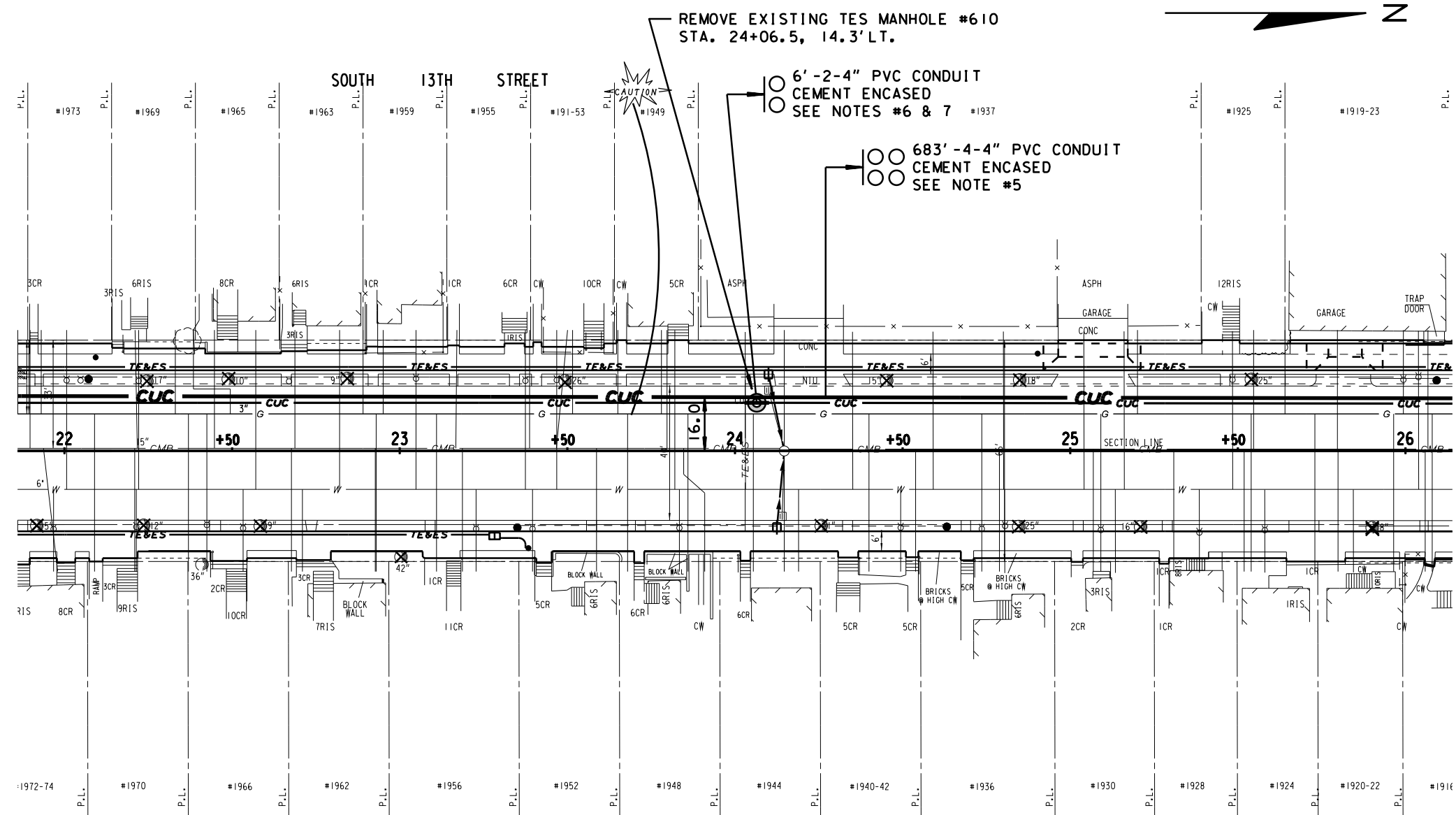
SCALE FEET

SHEET NO:

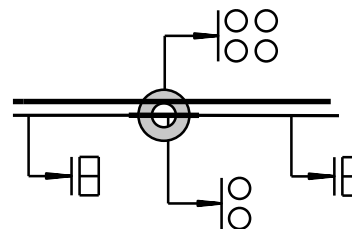
93

E



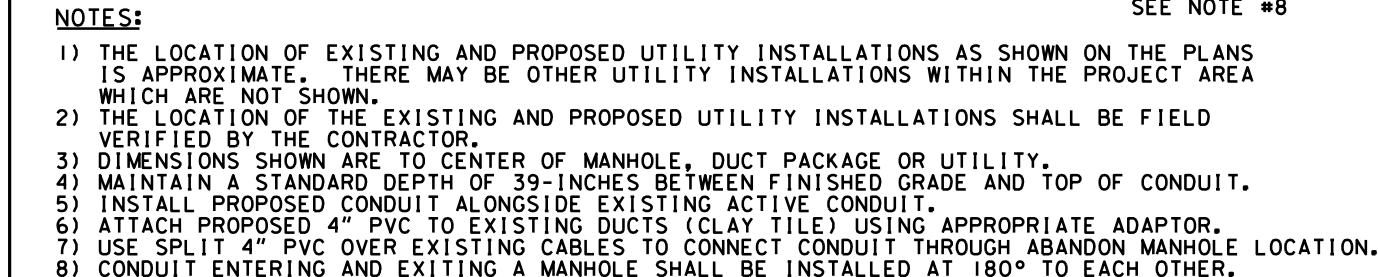
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- 5) INSTALL PROPOSED CONDUIT ALONGSIDE EXISTING ACTIVE CONDUIT.
- 6) ATTACH PROPOSED 4" PVC TO EXISTING DUCTS (CLAY TILE) USING APPROPRIATE ADAPTOR.
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- 8) CONDUIT ENTERING AND EXITING A MANHOLE SHALL BE INSTALLED AT 180° TO EACH OTHER.

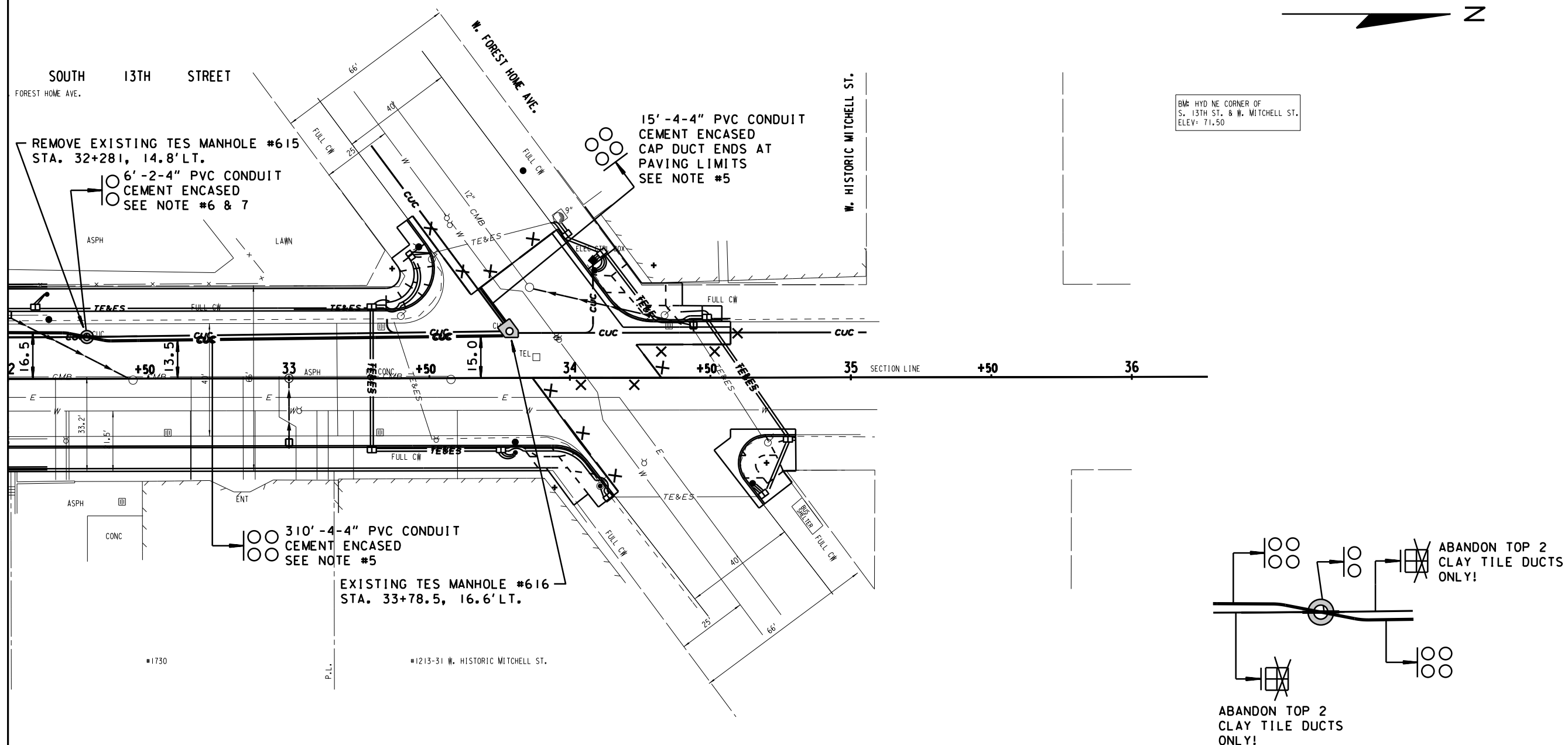
**LEGEND**

- CUC — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.
- PROPOSED TES MANHOLE
- CUC — EXISTING CONDUIT
- - - - - ABANDONED CONDUIT

SHEET 4 OF 9



— CUC — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT,
 NUMBER OF RUNS AS NOTED.
⊙ PROPOSED TES MANHOLE
— CUC — EXISTING CONDUIT
— — — ABANDONED CONDUIT

**NOTES:**

- 1) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
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- 7) USE SPLIT 4" PVC OVER EXISTING CABLES TO CONNECT CONDUIT THROUGH ABANDON MANHOLE LOCATION.
- 8) CONDUIT ENTERING AND EXITING A MANHOLE SHALL BE INSTALLED AT 180° TO EACH OTHER.

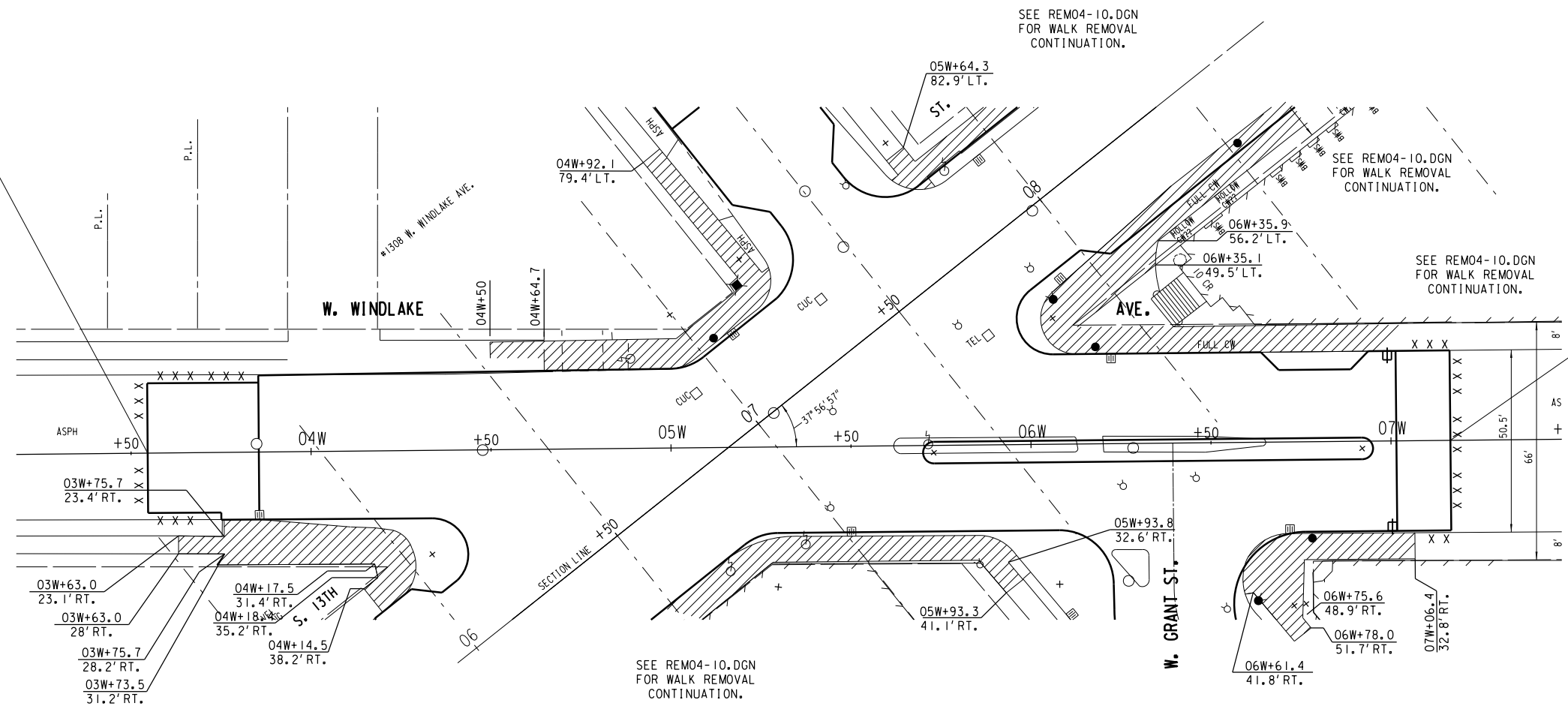
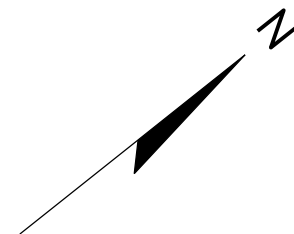
LEGEND

- **CUC** — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.
- PROPOSED TES MANHOLE
- **cuc** — EXISTING CONDUIT
- - - - ABANDONED CONDUIT

SHEET 6 OF 9

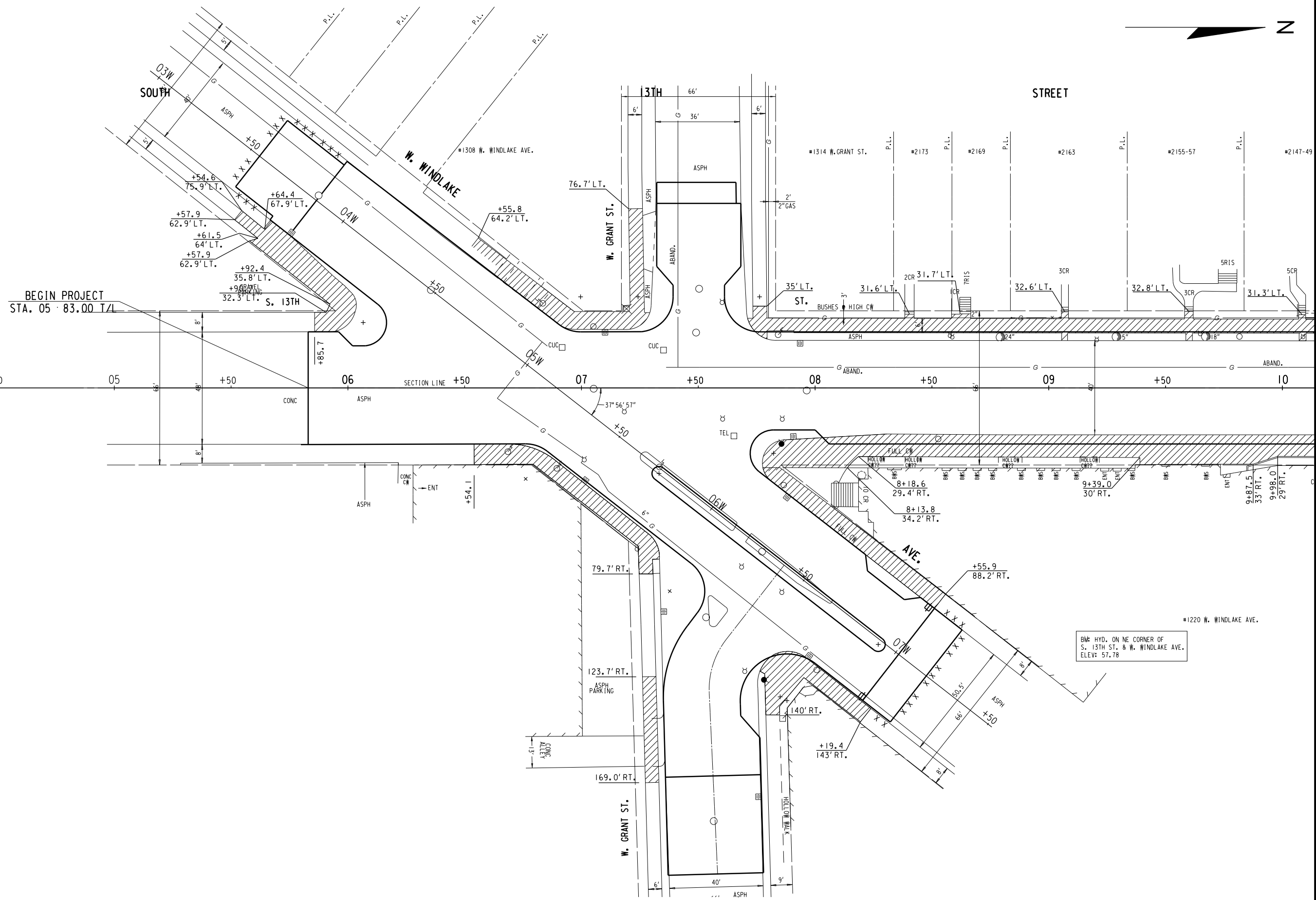
BEGIN PROJECT
STA. 03 + 54.62 T/L

END PROJECT
STA. 07 + 16.50 T/L



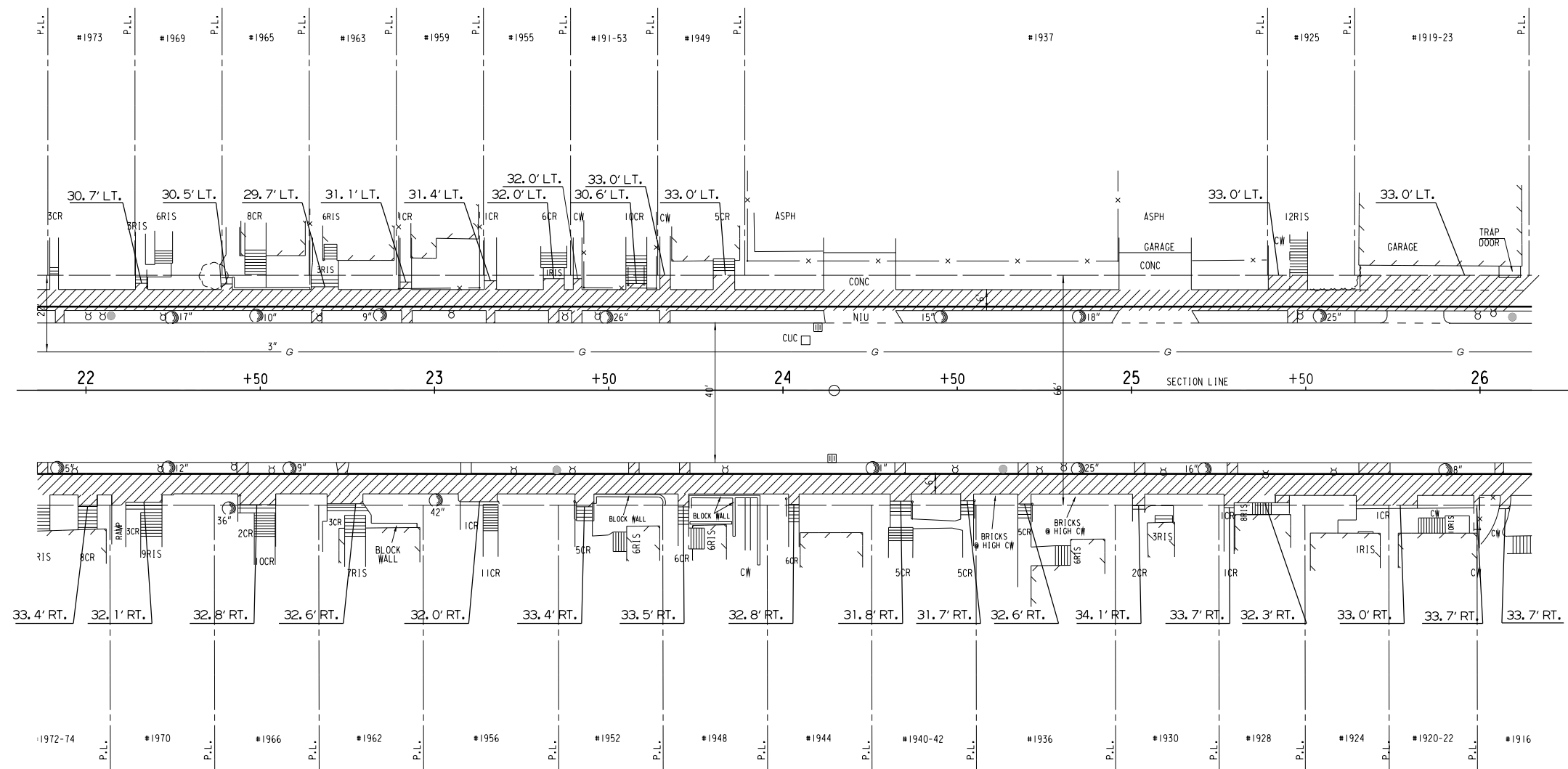
2

2



STREET

2 |

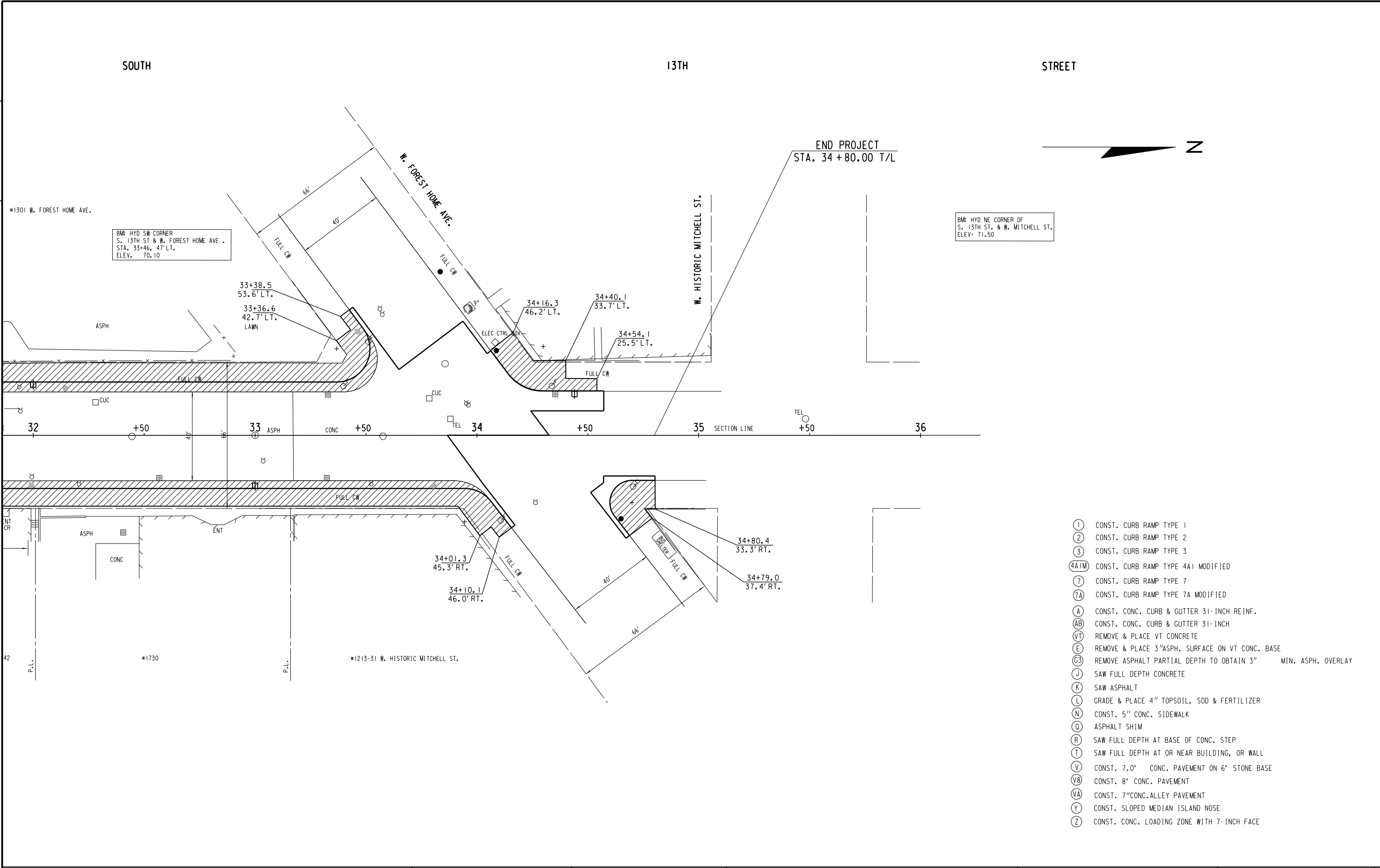


111



2

2



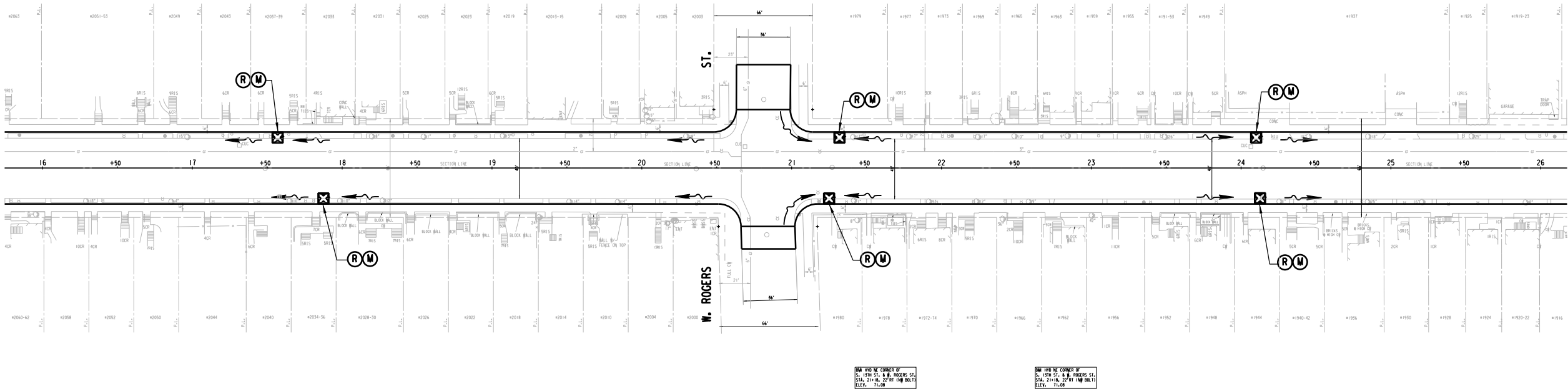
- ① CONST. CURB RAMP TYPE 1
- ② CONST. CURB RAMP TYPE 2
- ③ CONST. CURB RAMP TYPE 3
- ④A1M CONST. CURB RAMP TYPE 4A1 MODIFIED
- ⑦ CONST. CURB RAMP TYPE 7
- ⑦A CONST. CURB RAMP TYPE 7A MODIFIED
- ⑧ CONST. CONC. CURB & GUTTER 31-INCH REINF.
- ⑧B CONST. CONC. CURB & GUTTER 31-INCH
- ⑥ REMOVE & PLACE VT CONCRETE
- ⑥ REMOVE & PLACE 3" ASPH. SURFACE ON VT CONC. BASE
- ⑥3 REMOVE ASPHALT PARTIAL DEPTH TO OBTAIN 3" MIN. ASPH. OVERLAY
- ⑦ SAW FULL DEPTH CONCRETE
- ⑦ SAW ASPHALT
- ⑦ GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
- ⑦ CONST. 5" CONC. SIDEWALK
- ⑦ ASPHALT SHIM
- ⑦ SAW FULL DEPTH AT BASE OF CONC. STEP
- ⑦ SAW FULL DEPTH AT OR NEAR BUILDING, OR WALL
- ⑦ CONST. 7.0" CONC. PAVEMENT ON 6" STONE BASE
- ⑦B CONST. 8" CONC. PAVEMENT
- ⑦A CONST. 7" CONC. ALLEY PAVEMENT
- ⑦ CONST. SLOPED MEDIAN ISLAND NOSE
- ⑦ CONST. CONC. LOADING ZONE WITH 7-INCH FACE



SOUTH

13TH

STREET



- 1) INLET SCREEN TYPE R WILL BE PLACED AT ALL NEW INLET AND CATCH BASIN LOCATIONS DURING GRADING STAGES.
- 2) INLET BASKET TYPE M WILL BE PLACED UNDER ALL INLET AND CATCH BASIN COVERS UNTIL COMPLETION OF PROJECT.
- 3) EROSION CONTROL FEATURES AS SHOWN ON THE PLAN ARE SUGGESTED LOCATIONS, EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- 4) SEE CONSTRUCTION DETAILS.

LEGEND

-  (R) INLET SCREEN TYPE R
-  (M) INLET BASKET TYPE M
-  SURFACE WATER FLOW

STREET



3

DATE 22FEB16		E S T I M A T E O F Q U A N T I T I E S			
LINE				2505-00-75	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	201.0120	Clearing	ID	596.000	596.000
0020	201.0220	Grubbing	ID	749.000	749.000
0030	204.0100	Removing Pavement	SY	240.000	240.000
0040	204.0115	Removing Asphaltic Surface Butt Joints	SY	450.000	450.000
0050	204.0150	Removing Curb & Gutter	LF	6,420.000	6,420.000
0060	204.0155	Removing Concrete Sidewalk	SY	7,670.000	7,670.000
0070	204.0195	Removing Concrete Bases	EACH	7.000	7.000
0080	204.0220	Removing Inlets	EACH	3.000	3.000
0090	204.0255	Abandoning Catch Basins	EACH	28.000	28.000
0100	205.0100	Excavation Common **P**	CY	6,082.000	6,082.000
0110	209.0100	Backfill Granular	CY	1.000	1.000
0120	213.0100	Finishing Roadway (project) 01. 2505-00-75	EACH	1.000	1.000
0130	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,112.000	1,112.000
0140	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	6,300.000	6,300.000
0150	415.0070	Concrete Pavement 7-Inch	SY	16,030.000	16,030.000
0160	415.0080	Concrete Pavement 8-Inch	SY	230.000	230.000
0170	415.0310	Concrete Alley	SY	8.000	8.000
0180	416.0170	Concrete Driveway 7-Inch	SY	220.000	220.000
0190	416.0190	Concrete Driveway 9-Inch	SY	79.000	79.000
0200	416.0610	Drilled Tie Bars	EACH	140.000	140.000
0210	455.0605	Tack Coat	GAL	16.000	16.000
0220	465.0105	Asphaltic Surface	TON	110.000	110.000
0230	465.0125	Asphaltic Surface Temporary	TON	8.000	8.000
0240	601.0331	Concrete Curb & Gutter 31-Inch	LF	6,470.000	6,470.000
0250	602.0410	Concrete Sidewalk 5-Inch	SF	39,300.000	39,300.000
0260	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	400.000	400.000
0270	602.1000	Concrete Loading Zone	SF	740.000	740.000
0280	611.2004	Manholes 4-FT Diameter	EACH	2.000	2.000
0290	611.9705	Salvaged Manhole Covers	EACH	22.000	22.000
0300	619.1000	Mobilization	EACH	1.000	1.000
0310	621.0100	Landmark Reference Monuments	EACH	1.000	1.000
0320	623.0200	Dust Control Surface Treatment	SY	16,060.000	16,060.000
0330	624.0100	Water	MGAL	63.000	63.000
0340	625.0100	Topsoil	SY	1,330.000	1,330.000
0350	629.0210	Fertilizer Type B	CWT	1.000	1.000
0360	631.1000	Sod Lawn	SY	1,330.000	1,330.000
0370	642.5401	Field Office Type D 01. 2505-00-75	EACH	1.000	1.000
0380	643.0100	Traffic Control (project) 01. 2505-00-75	EACH	1.000	1.000
0390	643.0300	Traffic Control Drums	DAY	10,797.000	10,797.000
0400	643.0420	Traffic Control Barricades Type III	DAY	10,793.000	10,793.000
0410	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	180.000	180.000
0420	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	180.000	180.000
0430	643.0705	Traffic Control Warning Lights Type A	DAY	21,586.000	21,586.000
0440	643.0715	Traffic Control Warning Lights Type C	DAY	10,797.000	10,797.000
0450	643.0900	Traffic Control Signs	DAY	8,347.000	8,347.000
0460	644.1410.S	Temporary Pedestrian Surface Asphalt	SF	4,744.000	4,744.000
0470	644.1420.S	Temporary Pedestrian Surface Plywood	SF	20,932.000	20,932.000
0480	644.1430.S	Temporary Pedestrian Surface Plate	SF	2,303.000	2,303.000
0490	644.1601.S	Temporary Curb Ramp	EACH	45.000	45.000
0500	646.0106	Pavement Marking Epoxy 4-Inch	LF	4,623.000	4,623.000

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DATE 22FEB16		E S T I M A T E O F Q U A N T I T I E S			
LINE				2505-00-75	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0510	646.0116	Pavement Marking Epoxy 6-Inch	LF	4,249.000	4,249.000
0520	647.0206	Pavement Marking Arrows Bike Lane Epoxy	EACH	10.000	10.000
0530	647.0306	Pavement Marking Symbols Bike Lane Epoxy	EACH	10.000	10.000
0540	647.0576	Pavement Marking Stop Line Epoxy 24-Inch	LF	239.000	239.000
0550	647.0776	Pavement Marking Crosswalk Epoxy 12-Inch	LF	1,583.000	1,583.000
0560	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	10,690.000	10,690.000
0570	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	3,456.000	3,456.000
0580	650.4000	Construction Staking Storm Sewer	EACH	31.000	31.000
0590	650.4500	Construction Staking Subgrade	LF	2,930.000	2,930.000
0600	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	670.000	670.000
0610	650.7000	Construction Staking Concrete Pavement	LF	2,930.000	2,930.000
0620	650.8500	Construction Staking Electrical Installations (project) 01. 2505-00-75	LS	1.000	1.000
0630	650.9910	Construction Staking Supplemental Control (project) 01. 2505-00-75	LS	1.000	1.000
0640	652.0220	Conduit Rigid Nonmetallic Schedule 40 1 1/2-Inch	LF	130.000	130.000
0650	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	255.000	255.000
0660	652.0230	Conduit Rigid Nonmetallic Schedule 40 2 1/2-Inch	LF	4,825.000	4,825.000
0670	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	3,575.000	3,575.000
0680	652.0610	Conduit Special 2 1/2-Inch	LF	150.000	150.000
0690	690.0150	Sawing Asphalt	LF	600.000	600.000
0700	690.0250	Sawing Concrete	LF	1,980.000	1,980.000
0710	715.0415	Incentive Strength Concrete Pavement	DOL	4,800.000	4,800.000
0720	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	600.000	600.000
0730	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	700.000	700.000
0740	SPV.0060	Special 01. INLET COVERS TYPE 57	EACH	35.000	35.000
0750	SPV.0060	Special 02. MANHOLE COVERS TYPE 58A	EACH	9.000	9.000
0760	SPV.0060	Special 03. CATCH BASINS TYPE 44A	EACH	35.000	35.000
0770	SPV.0060	Special 04. INLET SCREEN TYPE M	EACH	90.000	90.000
0780	SPV.0060	Special 05. INLET SCREEN TYPE R	EACH	90.000	90.000
0790	SPV.0060	Special 06. ADJUSTING WATER BOXES	EACH	40.000	40.000
0800	SPV.0060	Special 07. INSTALL TRAFFIC SIGNAL BASE	EACH	12.000	12.000
0810	SPV.0060	Special 08. INSTALL TRAFFIC CABINET BASE	EACH	2.000	2.000
0820	SPV.0060	Special 09. INSTALL 18" X 6' HIGH CYLINDRICAL COLUMN FORM	EACH	1.000	1.000
0830	SPV.0060	Special 10. RECTANGULAR POLYMER CONCRETE VAULT 13" X 24" X18"	EACH	33.000	33.000
0840	SPV.0060	Special 11. RECTANGULAR POLYMER CONCRETE VAULT 17" X 30" X18"	EACH	23.000	23.000
0850	SPV.0060	Special 12. ADJUSTING TES MANHOLE COVERS	EACH	5.000	5.000
0860	SPV.0060	Special 13. REMOVE TES MANHOLES	EACH	10.000	10.000
0870	SPV.0060	Special 14. INSTALLING CONDUIT INTO EXISTING MANHOLE	EACH	2.000	2.000
0880	SPV.0060	Special 15. 5' DIAMETER " DOGHOUSE " MANHOLE TYPE TES	EACH	1.000	1.000
0890	SPV.0060	Special 16. 4' DIAMETER " DOGHOUSE " MANHOLE TYPE TES	EACH	5.000	5.000
0900	SPV.0060	Special 17. CONSTRUCTION STAKING CURB RAMPS	EACH	27.000	27.000

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DATE 22FEB16		E S T I M A T E O F Q U A N T I T I E S			
LINE					2505-00-75
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0910	SPV.0090	Special 01. STORM SEWER PIPE CORRUGATED PVC 8-INCH	LF	915.000	915.000
0920	SPV.0090	Special 02. CONSTRUCTION STAKING CONCRETE SIDEWALK	LF	5,210.000	5,210.000
0930	SPV.0090	Special 03. 6-DUCT CONDUIT CEMENT ENCASED 4-inch Rigid Nonmetallic Conduit DB-60	LF	27.000	27.000
0940	SPV.0090	Special 04. 4-DUCT CONDUIT CEMENT ENCASED 4-inch Rigid Nonmetallic Conduit DB-60	LF	2,561.000	2,561.000
0950	SPV.0090	Special 05. 2-DUCT CONDUIT CEMENT ENCASED 4-inch Rigid Nonmetallic Conduit DB-60	LF	65.000	65.000
0960	SPV.0090	Special 06. 1-DUCT CONDUIT CEMENT ENCASED 4-inch Rigid Nonmetallic Conduit DB-60	LF	115.000	115.000
0970	SPV.0180	Special 01. JOINT SEALING	SY	16,058.000	16,058.000

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2505-00-75

REMOVAL CONSTRUCTION ITEMS

ITEM NO. UNIT PAY		CLEARING 201.0120 ID 0010	GRUBBING 201.0220 ID 0010	REMOVING PAVEMENT 204.0100 SY 0010	REMOVING ASPHALTIC SURFACE BUTT JOINTS 204.0115 SY 0010	REMOVING CURB AND GUTTER 204.0150 LF 0010	REMOVING CONCRETE SIDEWALK 204.0155 SY 0010	SAWING ASPHALT 690.0150 LF 0010	SAWING CONCRETE 690.0250 LF 0010
CATEGORY LOCATION									
STA 05W TO 07W	LT	0	0	0	0	0	0	0	0
STA 04W TO 07W	LT	0	0	0	100	240	1030	40	50
STA 7+00 TO 10+00	LT	40	60	0	30	370	230	40	20
STA 10+00 TO 16+00	LT	113	135	0	0	670	500	0	170
STA 16+00 TO 22+00	LT	90	95	0	100	650	450	0	100
STA 22+00 TO 26+00	LT	115	130	0	0	400	350	0	150
STA 26+00 TO 32+00	LT	0	35	0	0	610	650	370	90
STA 32+00 TO 34+80	LT	0	0	230	0	270	290	0	180
SUBTOTALS (LEFT)		358	455	230	230	3210	3500	450	760
STA 05W TO 07W	RT	0	0	0	0	270	700	60	40
STA 04W TO 07W	RT	0	0	0	100	110	930	80	40
STA 7+00 TO 10+00	RT	0	0	0	0	200	370	0	90
STA 10+00 TO 16+00	RT	50	60	10	0	650	490	0	130
STA 16+00 TO 22+00	RT	75	92	0	50	620	470	10	120
STA 22+00 TO 26+00	RT	75	92	0	0	400	320	0	110
STA 26+00 TO 32+00	RT	38	50	0	70	690	560	0	370
STA 32+00 TO 34+80	RT	0	0	0	0	270	330	0	320
SUBTOTALS (RIGHT)		238	294	10	220	3210	4170	150	1220
GRAND TOTALS		596	749	240	450	6,420	7,670	600	1,980

PAVEMENT RELATED CONSTRUCTION ITEMS															
2505-00-75		BASE AGGREGATE DENSE 3/4 INCH 305.0110 TON 0010	BASE AGGREGATE DENSE 1-1/4 INCH 305.0120 TON 0010	CONCRETE PAVEMENT 7-INCH 415.0070 SY 0010	CONCRETE PAVEMENT 8-INCH 415.0080 SY 0010	CONCRETE ALLEY 415.0310 SY 0010	CONCRETE DRIVEWAY 7-INCH 416.0170 SY 0010	CONCRETE DRIVEWAY 9-INCH 416.0190 SY 0010	DRILLED TIE BARS 416.0610 EA 0010	TACK COAT 455.0605 GAL 0010	ASPHALTIC SURFACE 465.0105 TON 0010	CONCRETE CURB AND GUTTER 31- INCH 601.0331 LF 0010	CONCRETE SIDEWALK 5- INCH 602.0410 SF 0010	CURB RAMP DETECTABLE WARNING FIELD YELLOW 602.0505 SF 0010	CONCRETE LOADING ZONE 602.1000 SF 0010
ITEM NO.	UNIT PAY	CATEGORY													
LOCATION															
STA 05W TO 07W	LT	↑	0	0	0	0	0	0	0	0	0	0	0	0	0
STA 04W TO 07W	LT		310	810	0	0	0	0	0	3	20	230	1270	30	120
STA 7+00 TO 10+00	LT		370	1220	0	0	30	0	0	1	5	400	1960	20	0
STA 10+00 TO 16+00	LT		680	1710	0	0	0	0	10	0	0	670	4290	30	0
STA 16+00 TO 22+00	LT		620	1540	0	0	0	0	0	2	20	640	3570	35	0
STA 22+00 TO 26+00	LT		390	980	0	0	50	0	0	0	0	400	2400	0	0
STA 26+00 TO 32+00	LT		630	1570	0	0	0	79	10	0	0	600	3620	35	0
STA 32+00 TO 34+80	LT		270	470	230	0	0	0	70	0	0	260	1820	30	0
SUBTOTALS (LEFT)			3270	8300	230	0	80	79	90	6	45	3200	18930	180	120
STA 05W TO 07W	RT	↓	140	280	0	0	20	0	0	4	30	290	410	20	0
STA 04W TO 07W	RT		160	370	0	0	0	0	0	3	15	190	1440	40	620
STA 7+00 TO 10+00	RT		200	790	0	0	30	0	0	0	0	220	2360	30	0
STA 10+00 TO 16+00	RT		660	1670	0	8	20	0	10	0	0	640	3360	30	0
STA 16+00 TO 22+00	RT		620	1540	0	0	0	0	0	1	10	610	3840	30	0
STA 22+00 TO 26+00	RT		400	980	0	0	0	0	0	0	0	400	2720	0	0
STA 26+00 TO 32+00	RT		650	1620	0	0	40	0	0	2	10	650	4350	40	0
STA 32+00 TO 34+80	RT		200	480	0	0	30	0	40	0	0	270	1890	30	0
SUBTOTALS (RIGHT)			3030	7730	0	8	140	0	50	10	65	3270	20370	220	620
GRAND TOTALS		1112	6,300	16,030	230	8	220	79	140	16	110	6,470	39,300	400	740

2505-00-75

MISCELLANEOUS ITEMS																			
ITEM NO.		FINISHING		LANDMARK	DUST CONTROL			FERTILIZER		TRAFFIC	CONST.	CONST.	CONST.	CONST.	INLET SCREEN	INLET SCREEN	ADJUSTING	CONST.	CONST.
UNIT PAY		ROADWAY	MOBILIZATION	REFERENCE	SURFACE	WATER	TOP SOIL	TYPE B	SOD LAWN	CONTROL	STAKING	STAKING	STAKING	STAKING CONC.	TYPE M	TYPE R	WATER	STAKING	STAKING CONC.
		(PROJECT)		MONUMENTS	TREATMENT					(PROJECT)	STORM	SUBGRADE	CURB & GUTTER	PAVEMENT			BOX	CURB RAMP	SIDEWALK
		213.0100	619.1000	621.0100	623.0200	624.0100	625.0100	629.021	631.1000	643.0100	650.4000	650.4500	650.5500	650.7000	SPV.0060.04	SPV.0060.05	SPV.0060.06	SPV.0060.17	SPV.0090.02
CATEGORY		EACH	EACH	EACH	SY	MG	SY	CWT	SY	EACH	EACH	LF	LF	LF	EACH	EACH	EACH	EACH	LF
LOCATION		0010	0010	0010	0010	0010	0010	0010	0010	0010	0020	0010	0010	0010	0010	0010	0010	0010	0010
STA 05W TO 07W	LT	↑	↑	0	0	↑	0	↑	0	↑	↑	0	↑	0	↑	↑	↑	1	0
STA 04W TO 07W	LT	↑	↑	0	810	↑	220	↑	220	↑	↑	120	↑	120	↑	↑	↑	1	140
STA 7+00 TO 10+00	LT	↑	↑	0	1220	↑	120	↑	120	↑	↑	110	↑	110	↑	↑	↑	3	220
STA 10+00 TO 16+00	LT	↑	↑	0	1710	↑	50	↑	50	↑	↑	300	↑	300	↑	↑	↑	2	530
STA 16+00 TO 22+00	LT	↑	↑	0	1540	↑	80	↑	80	↑	↑	300	↑	300	↑	↑	↑	2	530
STA 22+00 TO 26+00	LT	↑	↑	0	980	↑	40	↑	40	↑	↑	200	↑	200	↑	↑	↑	0	400
STA 26+00 TO 32+00	LT	↑	↑	1	1570	↑	10	↑	10	↑	↑	300	↑	300	↑	↑	↑	3	540
STA 32+00 TO 34+80	LT	↑	↑	0	500	↑	20	↑	20	↑	↑	90	↑	90	↑	↑	↑	2	130
SUBTOTALS (LEFT)		↑	↑	1	8330	↑	540	↑	540	↑	↑	1420	↑	1420	↑	↑	↑		2490
STA 05W TO 07W	RT	↓	↓	0	280	↓	140	↓	140	↓	↓	80	↓	80	↓	↓	↓	2	70
STA 04W TO 07W	RT	↓	↓	0	370	↓	400	↓	400	↓	↓	130	↓	130	↓	↓	↓	2	180
STA 7+00 TO 10+00	RT	↓	↓	0	790	↓	10	↓	10	↓	↓	110	↓	110	↓	↓	↓	2	320
STA 10+00 TO 16+00	RT	↓	↓	0	1670	↓	70	↓	70	↓	↓	300	↓	300	↓	↓	↓	2	530
STA 16+00 TO 22+00	RT	↓	↓	0	1540	↓	60	↓	60	↓	↓	300	↓	300	↓	↓	↓	2	530
STA 22+00 TO 26+00	RT	↓	↓	0	980	↓	50	↓	50	↓	↓	200	↓	200	↓	↓	↓	0	400
STA 26+00 TO 32+00	RT	↓	↓	0	1620	↓	60	↓	60	↓	↓	300	↓	300	↓	↓	↓	4	500
STA 32+00 TO 34+80	RT	↓	↓	0	480	↓	0	↓	0	↓	↓	90	↓	90	↓	↓	↓	2	190
SUBTOTALS (RIGHT)		↓	↓	0	7730	↓	790	↓	790	↓	↓	1510	↓	1510	↓	↓	↓		2720
GRAND TOTALS		1	1	1	16,060	63	1,330	1	1,330	1	31	2,930	670	2,930	90	90	40	27	5,210
																			16,058

3

New Structures															
STRUCTURES															REMARKS
GROUP CODE	No.	LOCATION		COVER ELEV.	STRUCT.	FRAME & LID	DEPTH (FT)	CONNECTION STRUCTURE		SIZE (IN)	LENGTH (FT)	INVERT ELEV.			
		STATION	OFFSET									INLET	OUTLET		
														Slope	
0010	1A	03W+85.0	18.7' R	53.80	44A	57	8.25	SMH 03W+87, 1 L	200	8	20	49.55	49.05	0.025	CAUTION 6" WATER
0010	1	05W+50.0	24.0' R	55.17	44A	57	8.27	SMH 07+05, 0	205	8	40	50.90	49.90	0.0250	CAUTION GAS AND 2 @ 6" WATER MAINS
0010	2	06W+15.0	45.0' R	56.00	44A	57	8.25	SMH 06W+26, 37 R	202	8	18	51.75	51.30	0.0250	
0010	3	06W+16.0	25.0' L	56.25	44A	57	8.25	SMH 06W+20, 1 R	203	8	27	52.00	51.40	0.0220	
0010	4	06W+23.0	45.0' R	55.70	44A	57	8.25	SMH 06W+26, 37 R	202	8	8	51.45	51.25	0.0250	
0010	5	06W+92.7	84.1' R	55.62	44A	57	8.25	SMH 06W+83, 102 R	204	8	22	51.50	50.95	0.0250	CAUTION TEL AND 6" WATER
0010	6	06W+99.0	25.0' L	57.00	44A	57	8.25	SMH 07W+00, 0	36	8	24	52.70	51.60	0.0250	
0010	7	07W+00.0	25.0' R	56.75	44A	57	8.25	SMH 07W+00, 0	36	8	24	52.50	51.90	0.0250	
0010	8	07+01.2	24.0' L	55.08	44A	57	8.28	SMH 07+05, 0	205	8	24	50.80	50.20	0.0250	CAUTION CUC
0010	9	07+77.3	24.0' L	55.65	44A	57	8.25	SMH 07+50, 24 L	206	8	27	51.40	50.73	0.0250	CAUTION TEL AND 6" WATER
0010	10	07+83.3	18.0' R	56.09	44A	57	8.29	SHM 07+96, 1 R	208	8	20	51.80	51.30	0.0250	CAUTION 6" WATER
0010	11	08+25.0	24.0' R	56.07	44A	57	8.27	SMH 07+96, 1 R	208	8	36	51.80	50.90	0.0250	CAUTION 6" WATER
0010	12	11+50.0	24' L	60.30	44A	57	8.25	11+44, 0	210	8	24	56.05	55.45	0.0210	CAUTION CUC AND GAS
0010	13	11+50.0	24.0' R	60.22	44A	57	8.27	11+44, 0	210	8	23	55.95	55.35	0.0215	CAUTION 6" WATER
0010	14	13+99.5	48.0' R	63.05	44A	57	8.25	14+12, 45 R	214	8	12	58.80	58.50	0.0250	CAUTION ELEC
0010	15	14+37.5	55.5' R	63.38	44A	57	8.28	14+12, 45 R	214	8	26	59.10	58.45	0.0250	CAUTION 4" GAS, 8" WATER, & ELEC
0010	16	14+62.5	24.0' L	63.95	44A	57	8.25	14+62, 0	215	8	23	59.70	59.15	0.0240	CAUTION CUC AND 2" GAS
0010	17	14+65.0	24.0' R	64.04	44A	57	8.29	14+62, 0	215	8	23	59.75	59.20	0.0240	CAUTION 6" WATER
0010	18	17+57.0	24.0' L	66.90	44A	57	8.25	17+50, 0	231	8	25	62.65	62.30	0.0200	CAUTION CUC AND 2" GAS
0010	19	17+87.5	24.0' R	67.12	44A	57	8.27	17+50, 0	231	8	44	63.35	62.25	0.0205	CAUTION 6" WATER
0010	20	21+25.0	24.0' R	68.92	44A	57	8.27	21+27, 1	218	8	24	64.65	64.05	0.0210	
0010	21	21+32.0	24.0' L	69.20	44A	57	8.25	21+27, 1	218	8	24	64.65	64.15	0.0210	
0010	22	24+10.0	24.0' L	66.96	44A	57	8.25	24+15, 0	219	8	24	62.70	62.20	0.0210	CAUTION CUC, ELEC, & 3" GAS
0010	23	24+12.5	24.0' R	67.35	44A	57	8.25	24+15, 0	219	8	24	63.10	62.55	0.0230	CAUTION 6" WATER & ELEC
0010	24	27+10.0	24.0' L	64.50	44A	57	8.25	27+03, 0	220	8	24	60.25	59.65	0.0250	CAUTION CUC & GAS
0010	25	27+20.0	24.0' R	64.65	44A	57	8.25	27+03, 0	220	8	28	60.40	59.70	0.0250	CAUTION 6" WATER & GAS
0010	26	27+55.0	69.0' R	64.50	44A	57	8.25	27+65, 48 R	223	8	22	60.25	59.70	0.0250	
0010	27	27+76.0	69.0' R	64.60	44A	57	8.25	27+65, 48 R	223	8	23	60.35	59.80	0.0240	CAUTION 3" GAS & ELEC
0010	28	28+00.0	24.0' R	64.94	44A	57	8.29	27+90, 0	224	8	23	60.60	60.10	0.0240	CAUTION 16" WATER & CUC
0010	29	28+10.0	24.0' R	64.8	44A	57	8.25	27+90, 0	224	8	29	60.55	59.90	0.0225	CAUTION 6" WATER & 3" GAS
0010	30	31+25.0	24.0' R	66.18	44A	57	8.28	31+27, 1 R	226	8	23	61.90	61.35	0.0240	CAUTION 6" WATER & ELEC
0010	31	31+30.0	24.0' L	66.35	44A	57	8.25	31+27, 1 R	226	8	24	62.10	61.50	0.0250	CAUTION CUC & GAS
0010	32	32+00.0	24.0' L	66.45	44A	57	8.25	32+44, 0	228	8	50	62.20	61.00	0.0240	CAUTION CUC
0010	33	33+00.0	24.0' R	67.61	44A	57	8.26	33+00, 0	34	8	23	63.35	62.80	0.0240	CAUTION 6" WATER & ELEC
0010	34	33+00.0	0	68	4' Dia. MH	58A	14					54.00			
0010	35	34+44.0	20.0' L	67.46	44A	57	8.29	33+85, 32L	230	8	60	63.25	61.75	0.0250	
0010	36	07W+00.0	0	57.46	4' Dia. MH	58A	12.96					44.50			

35 Inlet Covers Type 57 (SPV.0060.01) (0010 - Participating)
35 Catch Basins Type 44A (SPV.0060.03) (0010 - Participating)
915 LF Storm Sewer Pipe Corrugated PVC 8-Inch (SPV.0090.01) (0010 - Participating)
2 Manholes 4-FT Diameter (611.2004) (0010 - Participating)

3

NEW MANHOLE COVERS					
GROUP CODE	No	Location		PROPOSED ELEVATION	COVER TYPE
		STATION	OFFSET		
0010	202	06W+26	37' R	55.92	58A
0010	213	14+10	45 L	63.40	58A
0010	214	14+12	45 R	63.68	58A
0010	215	14+65	0	64.50	58A
0010	217	20+86	45 L	69.18	58A
0010	218	21+27	1 L	69.66	58A
0010	226	31+27	1 R	66.91	58A
0010	229	33+58	0	68.17	58A
0010	233	33+85	32 L	67.58	58A

9 Manhole Covers Type 58A (SPV.0060.02) (0010 - Participating)

Remove Inlets			
GROUP CODE	NO.	LOCATION	
		STATION	OFFSET
0010	101	05W+50	25' R
0010	105	06W+93	82' R
0010	121	27+56	69' R

3 Removing Inlets (204.0220) (0010 - Participating)

ABANDONING DRAINAGE STRUCTURES				
GROUP CODE	NO.	LOCATION		REMARKS
		STATION	OFFSET	
0010	102	06W+10	48' R	Catch Basin
0010	103	06W+22	25' L	Catch Basin
0010	104	06W+70	25' R	Catch Basin
0010	106	07+10	25' L	Catch Basin
0010	107	07+89	20' R	Catch Basin
0010	108	07+91	22' L	Catch Basin
0010	109	11+43	20' L	Catch Basin
0010	110	11+47	20' R	Catch Basin
0010	111	14+00	40' R	Catch Basin
0010	112	14+37	38' R	Catch Basin
0010	113	14+58	20' L	Catch Basin
0010	114	14+59	20' R	Catch Basin
0010	115	17+57	20' L	Catch Basin
0010	116	17+58	20' R	Catch Basin
0010	117	24+10	20' L	Catch Basin
0010	118	24+14	20' R	Catch Basin
0010	119	26+80	19' L	Catch Basin
0010	120	27+33	21' R	Catch Basin
0010	132	27+50	33' R	Catch Basin
0010	122	27+75	36' R	Catch Basin
0010	123	27+88	20' L	Catch Basin
0010	124	27+90	21' R	Catch Basin
0010	125	31+00	20' L	Catch Basin
0010	126	31+21	21' R	Catch Basin
0010	127	32+00	24' L	Catch Basin
0010	128	32+57	20' R	Catch Basin
0010	129	33+33	24' L	Catch Basin
0010	130	33+35	21' R	Catch Basin
0010	131	34+35	20' L	Catch Basin

28 Abandoning Catch Basins (204.0255) (0010 - Participating)

SALVAGE MANHOLE COVERS				
GROUP CODE	No	Location		PROPOSED ELEVATION
		STATION	OFFSET	
0010	200	03W+85	0	54.64
0010	201	04W+48	0	54.96
0010	203	06W+28	1' R	57.31
0010	204	06W+83	102' R	56.71
0010	205	07+05	0	55.70
0010	206	07+49	24' L	55.80
0010	207	07+51	43' L	55.75
0010	208	07+97	1' R	56.46
0010	209	11+04	0	60.39
0010	210	11+44	0	60.85
0010	211	13+74	0	63.53
0010	216	20+36	0	69.79
0010	219	24+15	0	67.72
0010	220	27+03	0	65.24
0010	221	27+45	24' L	65.04
0010	222	27+64	21' R	65.21
0010	223	27+64	48' R	65.03
0010	224	27+92	0 R	65.51
0010	225	30+34	2' R	66.69
0010	228	32+35	0 R	67.66
0010	231	17+48	0	67.55
0010	232	30+81	43' R	66.63

22 Salvage Manhole Covers (611.9705) (0010 - Participating)

2505-00-05

CATEGORY 0010

TRAFFIC CONTROL ITEMS

	ITEMS	STAGE 1		STAGE 1A		STAGE 1B		STAGE 2		STAGE 2A		STAGE 2B		STAGE 2C		STAGE 2D		TOTAL	
		EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY		
#	TRAFFIC CONTROL DRUMS (643.0300)	83	5,229	2	64	5	155	78	4,914	7	133	12	204	7	98	0	0	10,797	DAY
##	TRAFFIC CONTROL BARRICADES TYPE III (643.0420)	54	3,402	43	1376	18	558	63	3,969	28	532	17	289	17	238	33	429	10,793	DAY
	TRAFFIC CONTROL WARNING LIGHTS TYPE A (FLASHING) (643.0705)	108	6,804	86	2752	36	1,116	126	7,938	56	1,064	34	578	34	476	66	858	21,586	DAY
	TRAFFIC CONTROL WARNING LIGHTS TYPE C (STEADY) (643.0715)	83	5,229	2	64	5	155	78	4,914	7	133	12	204	7	98	0	0	10,797	DAY
	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS (643.0500)		EACH	11	EACH		EACH	106	EACH	23	EACH	29	EACH	11	EACH	0	EACH	180	EACH
	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES (643.0600)		EACH	11	EACH		EACH	106	EACH	23	EACH	29	EACH	11	EACH	0	EACH	180	EACH
###	TEMPORARY PAVEMENT MARKING ITEMS:																		
####	TEMPORARY PAVEMENT MARKING PAINT 4-INCH (649.0420)	2,544		330		310						110		12		150		3,456	LF
	TOTAL PAINT 4-INCH (649.0402)	2,544		330		310						110		12		150		3,456	LF
####	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE (649.0400)							2,550		690		20		225				3,485	LF
####	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, YELLOW (649.0400)			480				4,700		950		625		450				7,205	LF
	TOTAL REMOVABLE TAPE 4-INCH (649.0400)			480				7,250		1,640		645		675				10,690	LF

ALL DRUMS HAVE ONE STEADY BURNING YELLOW LIGHT (LIGHTS ARE TO BE PAID FOR SEPERATLY UNDER THEIR APPROPRIATE BID ITEM)

ALL TYPE III BARRICADES HAVE TWO (2) FLASHING YELLOW LIGHTS (LIGHTS ARE TO BE PAID FOR SEPERATLY UNDER THEIR APPROPRIATE BID ITEM)

WHEN PLACING TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, THE TAPE SHALL BE SLICED OR CUT ACROSS IT'S WIDTH EVERY TWENTY FIVE (25) FEET

ALL TEMPORARY PAVEMENT MARKINGS MUST BE REMOVED PRIOR TO FINAL ACCEPTANCE OF PROJECT

SOME ITEMS FROM STAGE 1A AND 2A ARE USED IN 1B AND 2B

2505-00-05

CATEGORY 0010

TRAFFIC CONTROL SIGNS

ITEM		SIZE	DESCRIPTION	STAGE 1		STAGE 1A		STAGE 1B		STAGE 2		STAGE 2A		STAGE 2B		STAGE 2C		STAGE 2D	TOTAL
W020-1		48"x48"	"ROAD WORK AHEAD"	7		4		3		7		4		3		3		2	33
R11-2		48"x30"	"ROAD CLOSED"	3		5		2		7		2		1		2		3	25
R11-4		30"x48"	"ROAD CLOSED TO THRU TRAFFIC"	7		3		2		7		1		-		-		2	22
W01-7		24"x12"	"GO LEFT OR RIGHT DOUBLE ARROW"	-		-		1		3		-		-		1		1	6
W01-6R		24"x48"	"GO RIGHT ARROW"	4		1		-		-		-		-		-		1	6
R5-1		36"x36"	"DO NOT ENTER"	4		-		-		-		-		-		-		-	4
R3-2		36"x36"	"NO LEFT TURN SYMBOL"	4		1		1		3		-		-		1		1	11
R3-1		36"x36"	"NO RIGHT TURN SYMBOL"	-		-		-		4		-		-		-		-	4
W020-5R		48"x48"	"RIGHT LANE CLOSED AHEAD"	-		-		-		-		2		2		-		-	4
W04-2R		48"x48"	"MERGE LEFT"	-		-		-		-		2		2		-		-	4
W04-2L		48"x48"	"MERGE RIGHT"	-		1		-		-		1		1		1		-	4
W020-5L		36"x36"	"LEFT LANE CLOSED AHEAD"	-		1		-		-		1		1		-		-	3
R3-7R		36"x36"	"RIGHT LANE MUST TURN RIGHT"	-		-		-		-		-		1		-		1	2
W06-3		48"x48"	"TWO-WAY TRAFFIC"	-		-		-		7		3		3		3		-	16
R9-9		24"x12"	"SIDEWALK CLOSED"	5		4		1		6		4		-		1		4	25
FMS-5		24"x12"	"SIDEWALK CLOSED USE OTHER SIDE"	6		-		3		6		2		1		2		2	22
R9-11		30"x48"	"SIDEWALK CLOSED AHEAD"	4		4		-		2		2		-		-		-	12
TRAFFIC CONTROL SIGNS			643.0900 TRAFFIC CONTROL SIGNS TOTAL	44		24		13		52		24		15		14		17	203
				2,772		768		403		3,276		456		255		196		221	8,347 DAY
				"W0" SIGNS ARE THE SAME AS "W" SIGNS, EXCEPT THE BACKGROUND IS ORANGE.															

NOTE:

SIGN LAYOUT SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTARTION (FHWA)

MANUAL OF STANDARD HIGHWAY SIGNS, UNLESS OTHERWISE PROVIDED IN THE PLAN.

CONSTRUCTION ITEMS

2505-00-75

ITEM NO. UNIT PAY		TEMP. PED. SURFACE ASPHALT 644.1410.S SF 0010	TEMP. PED. SURFACE PLYWOOD 644.1420.S SF 0010	TEMP. PED. SURFACE PLATE 644.1430.S SF 0010	TEMPORARY CURB RAMPS 644.1601.S EA 0010
CATEGORY LOCATION					
STA 04W+00 TO 07W+00	LT	976	0	0	5
STA 08+00 TO 17+00	LT	0	4144	383	5
STA 17+00 TO 29+00	LT	0	4480	768	8
STA 29+00 TO 33+00	LT	0	2200	0	1
STA 33+00 TO 34+00	LT	176	0	0	2
SUBTOTALS (LEFT)		1152	10824	1151	21
STA 05W+00 TO 07W+00	RT	1496	0	0	5
STA 05W+00 TO 07W+00	RT	440	0	0	3
STA 08+00 TO 17+00	RT	0	3536	384	5
STA 17+00 TO 29+00	RT	0	4700	768	2
STA 29+00 TO 33+00	RT	0	1872	0	3
STA 33+00 TO 34+00	RT	840	0	0	2
STA 34+00 TO 35+00	RT	816	0	0	4
SUBTOTALS (RIGHT)		3592	10108	1152	24
GRAND TOTALS		4744	20932	2303	45

PAVEMENT MARKING QUANTITIES							
Category		0010 - Participating					
Item Number		646.0106	646.0116	647.0206	647.0306	647.0576	647.0776
Description		Pavement Marking Epoxy 4-inch	Pavement Marking Epoxy 6-inch	Pavement Marking Arrows Bike Lane Epoxy	Pavement Marking Symbols Bike Lane Epoxy	Pavement Marking Stop Line 24-Inch	Pavement Marking Crosswalk Epoxy 12-inch
Unit Pay		LF	LF	EACH	EACH	LF	LF
Station to Station	Sta. 05+83 to Sta. 15+50 and Sta. 04W+00 to Sta. 07W+00	1,408	1,270	3	3	133	938
	Sta. 15+50 to Sta. 26+00	2,160	1,924	2	2		
	Sta. 26+00 to Sta. 34+80	1,055	1,055	5	5	106	645
Total		4,623	4,249	10	10	239	1,583

EARTH WORK SUMMARY

From/To Station	Location	Excavation Common (1) (item # 205.0100)		Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (6)	Mass Ordinate +/- (7)	Waste	Borrow (8)
		Cut (2)	EBS Excavation (3)				1.20 Factor			
		CY	CY	CY	CY	CY	CY	CY	CY	CY
05+83 to 34+80	South 13th Street	6082	0	53	6029	0	0	6029	6082	0

- 1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
- 2) Salvaged/Unsuable Pavement Material is included in Cut.
- 3) Salvaged/Unusable Pavement Material
- 4) Available Material = Cut - Salvaged/Unusuable Pavement Material
- 5) Expanded Fill. Factor = 1.20
- 5) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a
- See Section 9 of the Plan for Cut & Fill Quantities

ESTIMATE OF QUANTITIES; STREET LIGHTING 8c. TRAFFIC SIGNALS				
PROJECT ID. 2505-00-75				
MILWAUKEE COUNTY				
Group Code	Std.Bid Item No.	Description	Unit	Quantity
0010	204.0195	Removing Concrete Bases	EACH	7
0010	209.0100	Backfill Granular	CY	1
0010	465.0125	Asphaltic Surface Temporary	TON	8
0010	650.8500	Construction Staking Electrical	LS	1
0010	652.0220	Conduit Rigid Nonmetallic Schedule 40 1 1/2-Inch	LF	130
0010	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	255
0010	652.0230	Conduit Rigid Nonmetallic Schedule 40 2 1/2-Inch	LF	4,825
0010	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	3,575
0010	652.0610	Conduit Special 2.5-Inch	LF	150
0010	SPV.0060.07	Install Traffic Signal Base	EACH	12
0010	SPV.0060.08	Install Traffic Cabinet Base	EACH	2
0010	SPV.0060.09	Install 18 Inch Diameter x 6 Feet High Cylindrical Column Form	EACH	1
0010	SPV.0060.10	Rectangular Polymer Concrete Vault 13-Inch x 24-Inch x 18-Inch	EACH	33
0010	SPV.0060.11	Rectangular Polymer Concrete Vault 17-inch x 30-Inch x 18-Inch	EACH	23

3

CITY UNDERGROUND CONDUIT										
LOCATION	Category 0020									
	ADJUSTING TES MANHOLE COVERS	REMOVE TES MANHOLE	INSTALLING CONDUIT INTO EXISTING MANHOLE	5' DIAMETER "DOGHOUSE" MANHOLE TYPE TES	4' DIAMETER "DOGHOUSE" MANHOLE TYPE TES	6-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60	4-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60	2-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60	1-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60	
	SPV.0060.12	SPV.0060.13	SPV.0060.14	SPV.0060.15	SPV.0060.16	SPV0090.03	SPV0090.04	SPV0090.05	SPV0090.06	
	EACH	EACH	EACH	EACH	EACH	LF	LF	LF	LF	
MANHOLE 600 - STA 06 + 91.7, 17.3 LT		1								
MANHOLE 601 - STA 06 + 91.7, 16.5 LT				1						
MANHOLE 601 to MANHOLE 603							40			
MANHOLE 602 - STA 07 + 35.1, 16.2 LT		1								
MANHOLE 603 - STA 07 + 35.0, 16.5 LT	1				1					
MANHOLE 603 to POLICE CALL BOX								24		
MANHOLE 603 to TRAFFIC CONTROL CABINET									30	
MANHOLE 603 to MANHOLE 606							662			
MANHOLE 604 - STA 10 + 83.5, 14.8 LT		1						6		
MANHOLE 605 - STA 14 + 01.1, 15.0 RT		1								
MANHOLE 606 - STA 14 + 01.1, 15.5 LT	1				1					
MANHOLE 606 to TRAFFIC CONTROL CABINET									77	
MANHOLE 606 to MANHOLE 609							665			
MANHOLE 607 - STA 17 + 31.4, 15.1 LT		1						6		
MANHOLE 608 - STA 20 + 68.9, 15.0 LT		1								
MANHOLE 609 - STA 20 + 68.9, 15.0 LT	1				1					
MANHOLE 609 to MANHOLE 612							683			
MANHOLE 610 - STA 24 + 06.5, 14.3 LT		1						6		
MANHOLE 611 - STA 27 + 56.9, 13.9 LT		1								
MANHOLE 612 - STA 27 + 56.9, 13.9 LT	1				1					
MANHOLE 612 to STA 27 + 56.9, 43.0 LT						27				
STA 27 + 56.9, 43.0 LT to STA 27 + 66.9, 48.0 LT								17		
STA 27 + 56.9, 43.0 LT to PAVING LIMITS							7			
MANHOLE 612 to MANHOLE 614							160			
MANHOLE 613 - STA 30 + 64.1, 14.3 LT		1								
MANHOLE 614 - STA 30 + 64.1, 14.5 LT					1					
MANHOLE 614 to TRAFFIC CONTROL VAULT									8	
MANHOLE 614 to MANHOLE 616							310			
MANHOLE 615 - STA 32 + 28.1, 14.8 LT		1						6		
MANHOLE 616 - STA 33 + 78.5, 16.6 LT	1	NEW FRAME	2							
MANHOLE 614 to PAVING LIMITS							34			
TOTAL	5	10	2	1	5	27	2561	65	115	

3



BM: HYD. ON NE CORNER OF
S. 13TH ST. & W. WINDLAKE AVE.
ELEV: 57.78

DETAIL "A"

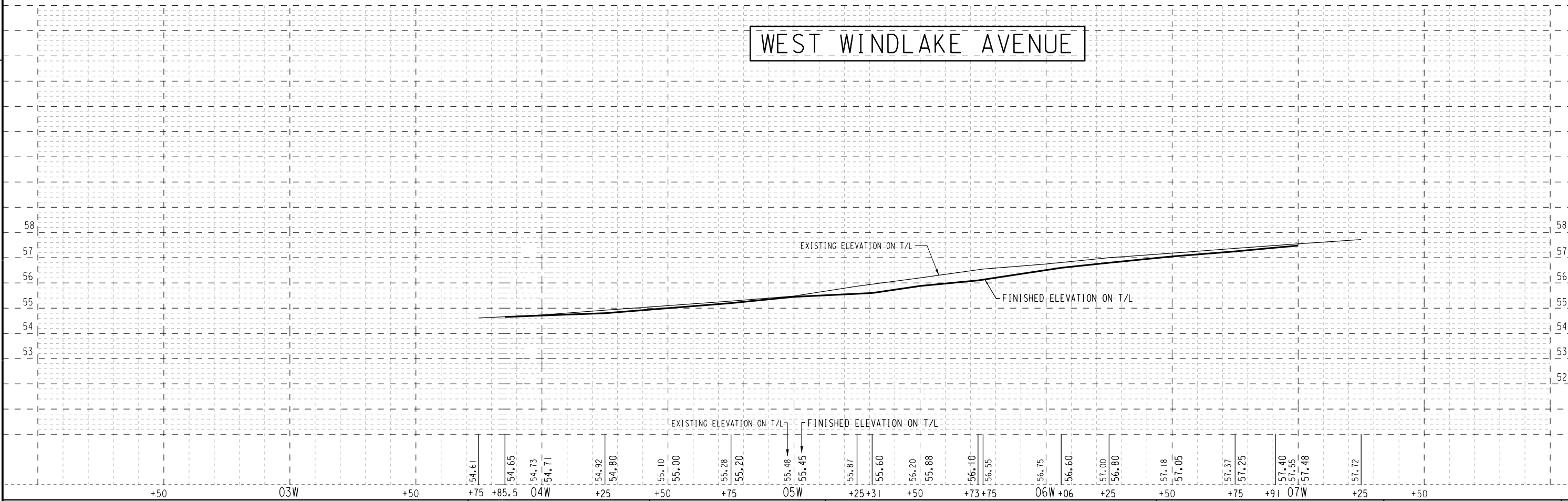
BEGIN PROJECT
S. 13TH ST.
STA. 05 + 83.00 T/L

+29.7W, 137.0' RT

E

FILE NAME= W:\SPR\13 WINDLAKE_FORESTHOME\04_07WINDLAKE-GRANT.DGN

WEST WINDLAKE AVENUE



5

- (5) CONST. CURB RAMP TYPE 5
- (CR) SEE CURB RAMP DETAIL
- (A) CONST. CONC. CURB & GUTTER 31-INCH
- (C) CONST. CONC. DRIVEWAY FLARED (7-INCH)
- (VT) REMOVE & PLACE VT CONCRETE
- (E) REMOVE & PLACE 3" ASPH. SURFACE ON VT CONC. BASE
- (E2) REMOVE & PLACE 2" ASPH. SURFACE ON VT CONC. BASE
- (G3) REMOVE ASPHALT PARTIAL DEPTH TO OBTAIN 3" MIN. ASPH. OVERLAY
- (J) SAW FULL DEPTH CONCRETE
- (K) SAW ASPHALT
- (L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
- (N) CONST. 5" CONC. SIDEWALK
- (P) REMOVE & PLACE VT ASPH. SURFACE ON VT CRUSH STONE BASE
- (PC) PEDESTRIAN CURB SEE RAMP DETAILS
- (D) ASPHALT SHIM
- (R) SAW FULL DEPTH AT BASE OF CONC. STEP
- (I) SAW FULL DEPTH AT OR NEAR BUILDING, OR WALL
- (V) CONST. 7.0" CONC. PAVEMENT ON 6" STONE BASE
- (VB) CONST. 8" CONC. PAVEMENT
- (VA) CONST. 7" CONC. ALLEY PAVEMENT
- (Y) CONST. SLOPED MEDIAN ISLAND NOSE
- (Z) CONST. CONC. LOADING ZONE WITH 7-INCH FACE

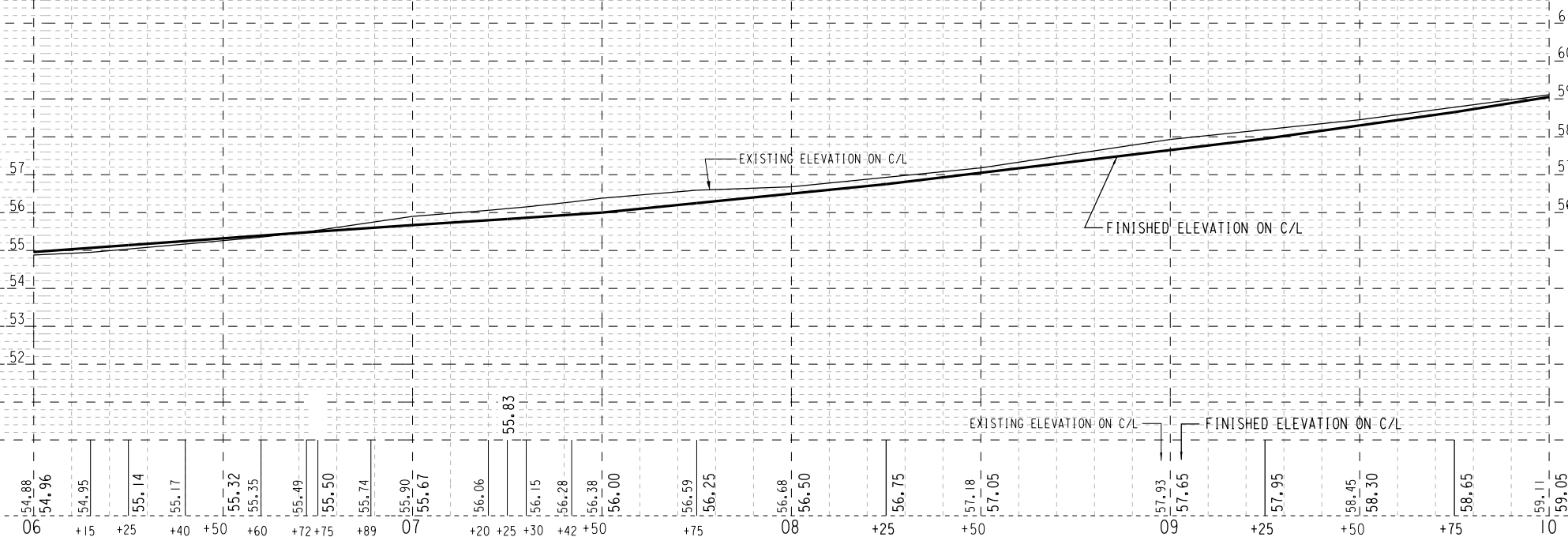
SOUTH

13TH

STREET

5

5



STATE PROJECT NUMBER 2505-00-75

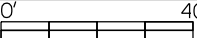
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HWY: LOCAL STREET

COUNTY: MILWAUKEE

PROFILE

SCALE FEET



SHEET NO:

126

E

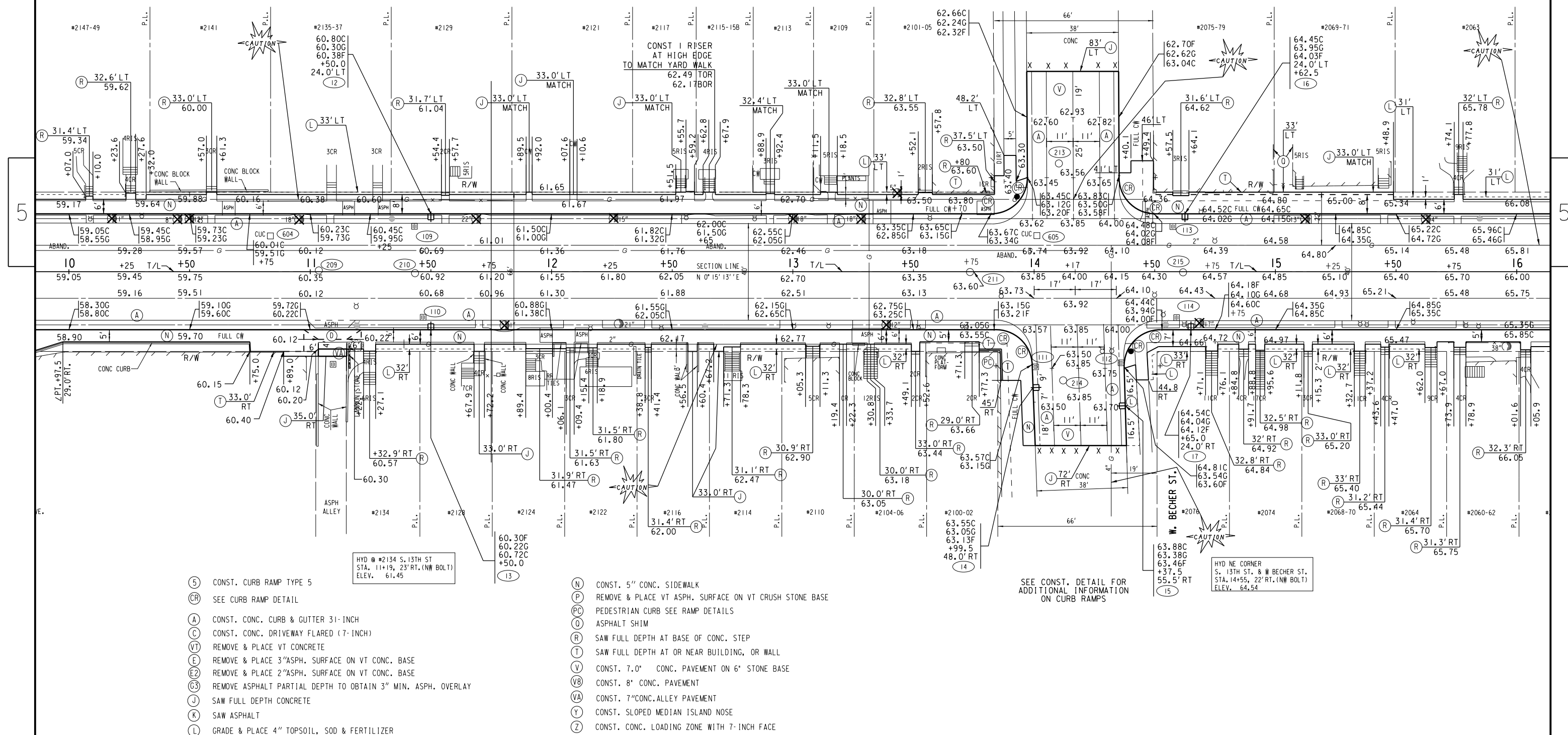
SOUTH

13TH

STREET

SEE CONST. DETAIL FOR
ADDITIONAL INFORMATION
ON CURB RAMPS

Z



- (5) CONST. CURB RAMP TYPE 5
(CR) SEE CURB RAMP DETAIL
(A) CONST. CONC. CURB & GUTTER 31-INCH
(C) CONST. CONC. DRIVEWAY FLARED (7-INCH)
(VT) REMOVE & PLACE VT CONCRETE
(E) REMOVE & PLACE 3" ASPH. SURFACE ON VT CONC. BASE
(E2) REMOVE & PLACE 2" ASPH. SURFACE ON VT CONC. BASE
(G3) REMOVE ASPHALT PARTIAL DEPTH TO OBTAIN 3" MIN. ASPH. OVERLAY
(J) SAW FULL DEPTH CONCRETE
(K) SAW ASPHALT
(L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER

- (N) CONST. 5" CONC. SIDEWALK
(P) REMOVE & PLACE VT ASPH. SURFACE ON VT CRUSH STONE BASE
(PC) PEDESTRIAN CURB SEE RAMP DETAILS
(Q) ASPHALT SHIM
(R) SAW FULL DEPTH AT BASE OF CONC. STEP
(T) SAW FULL DEPTH AT OR NEAR BUILDING, OR WALL
(V) CONST. 7.0" CONC. PAVEMENT ON 6" STONE BASE
(VB) CONST. 8" CONC. PAVEMENT
(VA) CONST. 7" CONC. ALLEY PAVEMENT
(Y) CONST. SLOPED MEDIAN ISLAND NOSE
(Z) CONST. CONC. LOADING ZONE WITH 7-INCH FACE

SEE CONST. DETAIL FOR
ADDITIONAL INFORMATION
ON CURB RAMPSHYD NE CORNER
S. 13TH ST. & W. BECHER ST.
STA. 14+55.22' RT. (NW BOLT)
ELEV. 64.54

STATE PROJECT NUMBER 2505-00-75

HWY: LOCAL STREET

COUNTY: MILWAUKEE

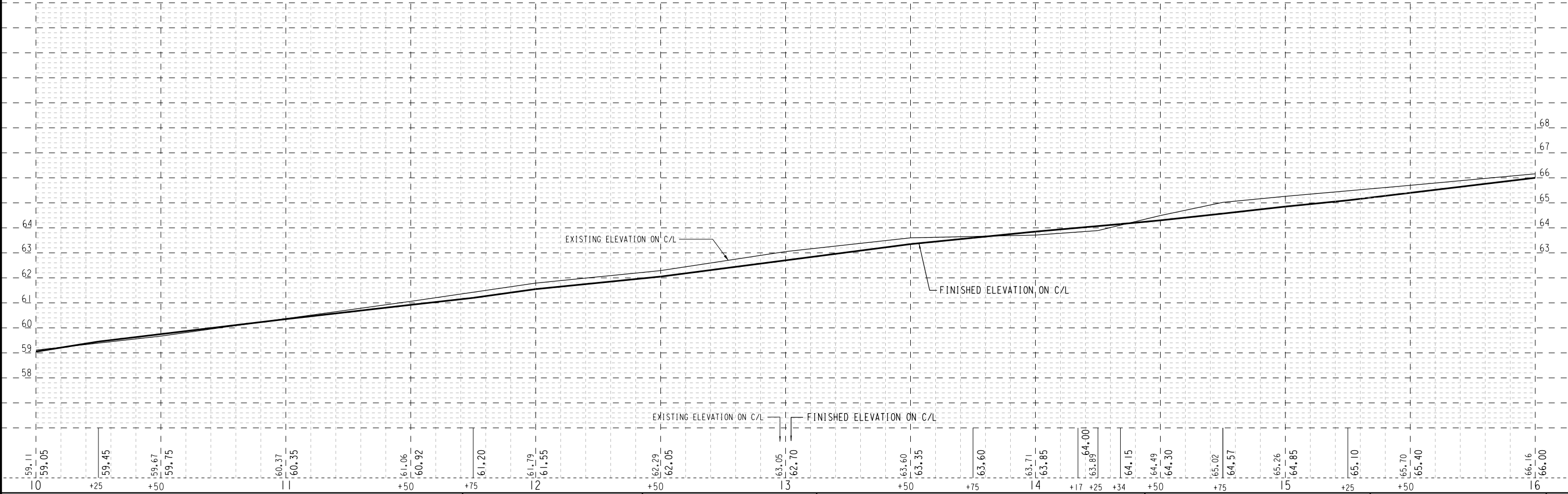
PLAN

SCALE FEET

SHEET NO:

127

E

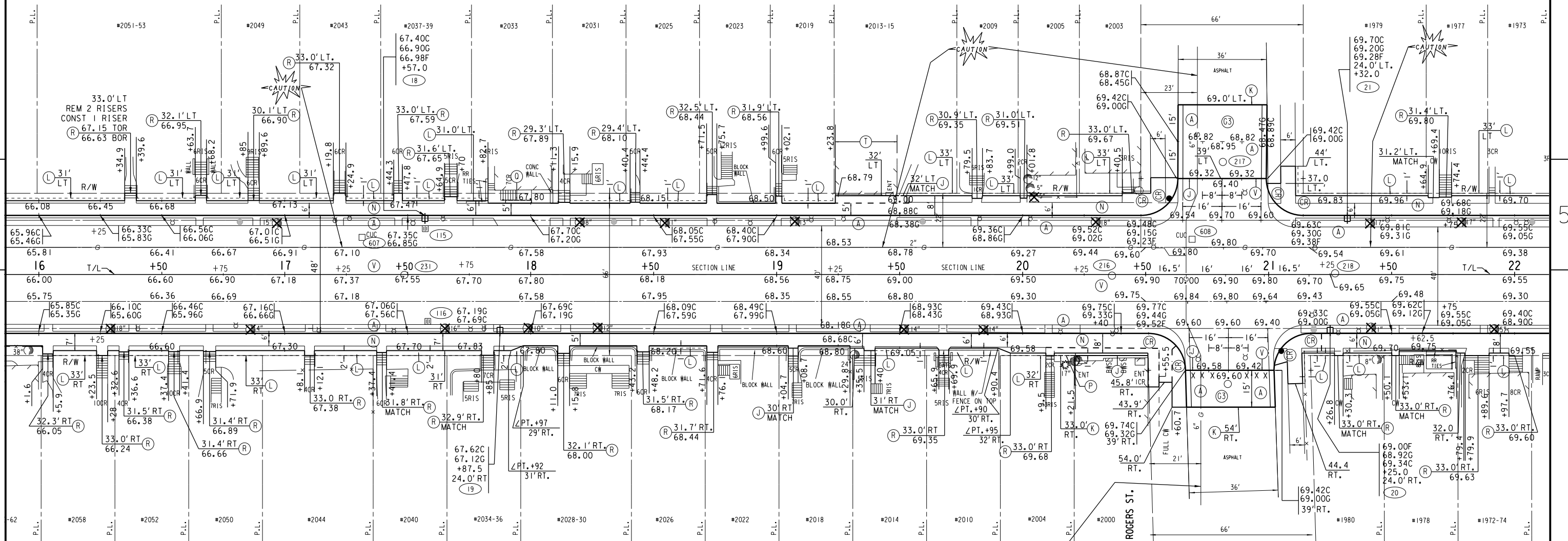


SOUTH

13TH

STREET

N

SEE CONST. DETAIL FOR
ADDITIONAL INFORMATION
ON CURB RAMPS

- (A) CONST. CONC. CURB & GUTTER 31-INCH
- (C) CONST. CONC. DRIVEWAY FLARED (7-INCH)
- (VT) REMOVE & PLACE VT CONCRETE
- (E) REMOVE & PLACE 3" ASPH. SURFACE ON VT CONC. BASE
- (E2) REMOVE & PLACE 2" ASPH. SURFACE ON VT CONC. BASE
- (G3) REMOVE ASPHALT PARTIAL DEPTH TO OBTAIN 3" MIN. ASPH. OVERLAY
- (J) SAW FULL DEPTH CONCRETE
- (K) SAW ASPHALT
- (L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
- (N) CONST. 5" CONC. SIDEWALK

- (P) REMOVE & PLACE VT ASPH. SURFACE ON VT CRUSH STONE BASE
- (PC) PEDESTRIAN CURB SEE RAMP DETAILS
- (O) ASPHALT SHIM
- (R) SAW FULL DEPTH AT BASE OF CONC. STEP
- (T) SAW FULL DEPTH AT OR NEAR BUILDING, OR WALL
- (V) CONST. 7.0" CONC. PAVEMENT ON 6" STONE BASE
- (VB) CONST. 8" CONC. PAVEMENT
- (VA) CONST. 7" CONC. ALLEY PAVEMENT
- (Y) CONST. SLOPED MEDIAN ISLAND NOSE
- (Z) CONST. CONC. LOADING ZONE WITH 7-INCH FACE

- (5) CONST. CURB RAMP TYPE 5
- (CR) SEE CURB RAMP DETAIL

SEE CONST. DETAIL FOR
ADDITIONAL INFORMATION
ON CURB RAMPSBM: HYD NE CORNER OF
S. 13TH ST. & W. ROGERS ST.
STA. 21+18, 22' RT (NW BOLT)
ELEV. 71.08

STATE PROJECT NUMBER 2505-00-75

HWY: LOCAL STREET

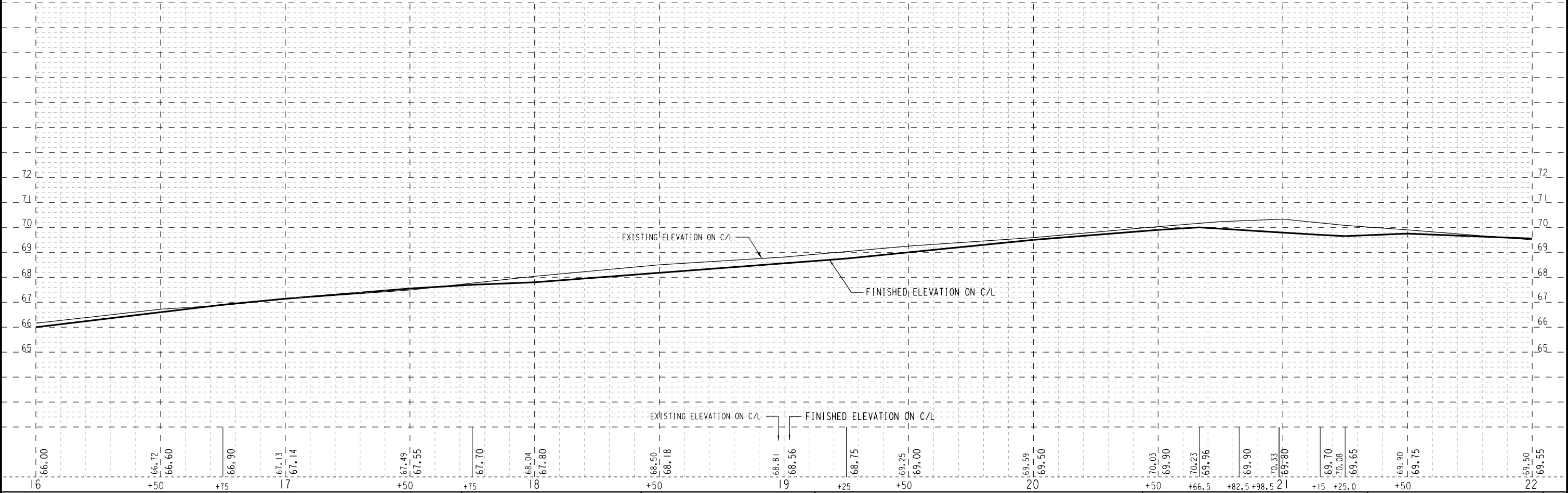
COUNTY: MILWAUKEE

PLAN

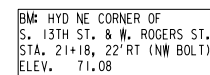
SCALE FEET 0' 40'

SHEET NO: 129

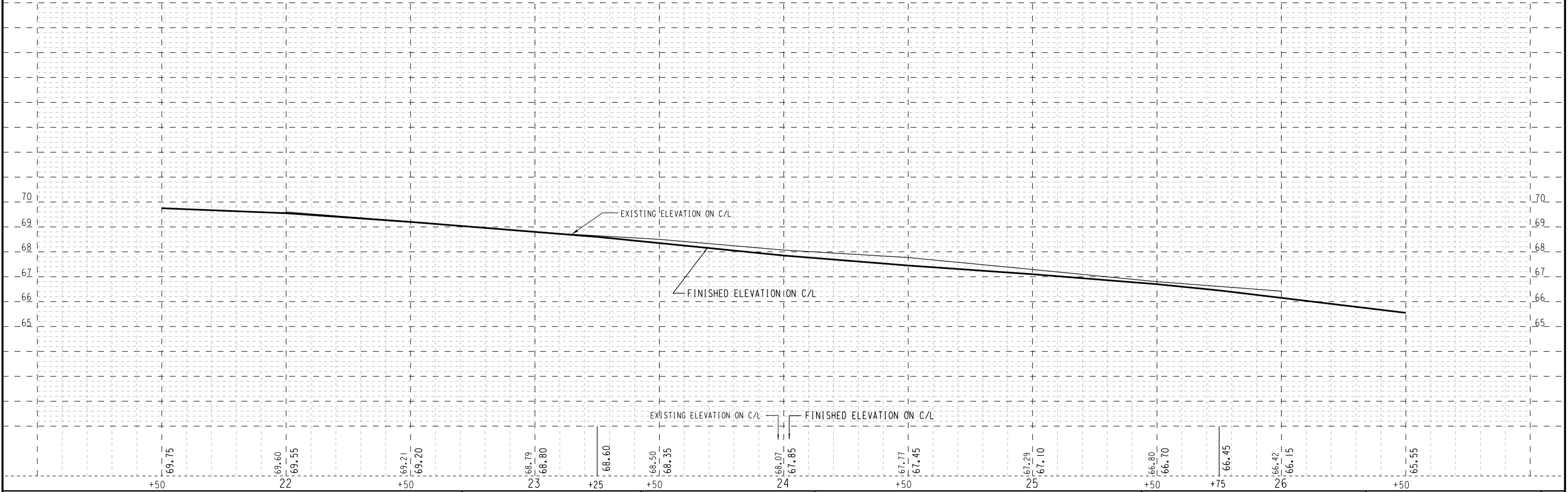
E



STREET



- | | | | | | |
|------|--|------|--|------|-------------------------|
| (A) | CONST. CONC. CURB & GUTTER 31-INCH | (P) | REMOVE & PLACE VT ASPH. SURFACE ON VT CRUSH STONE BASE | (5) | CONST. CURB RAMP TYPE 5 |
| (C) | CONST. CONC. DRIVEWAY REARED (7-INCH) | (PC) | PEDESTRIAN CURB SEE RAMP DETAILS | (CR) | SEE CURB RAMP DETAIL |
| (VT) | REMOVE & PLACE VT CONC | (Q) | ASPHALT SHIM | | |
| (E) | REMOVE & PLACE 3" ASPH. SURFACE ON VT CONC. BASE | (R) | SAW FULL DEPTH AT BASE OF CONC. STEP | | |
| (E2) | REMOVE & PLACE 2" ASPH. SURFACE ON VT CONC. BASE | (T) | SAW FULL DEPTH AT OR NEAR BUILDING, OR WALL | | |
| (G3) | REMOVE ASPHALT PARTIAL DEPTH TO OBTAIN 3" MIN. ASPH. OVERLAY | (V) | CONST. 7.0" CONC. PAVEMENT ON 6" STONE BASE | | |
| (J) | SAW FULL DEPTH CONCRETE | (VB) | CONST. 8" CONC. PAVEMENT | | |
| (K) | SAW ASPHALT | (VA) | CONST. 7" CONC. ALLEY PAVEMENT | | |
| (L) | GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER | (Y) | CONST. SLOPED MEDIAN ISLAND NOSE | | |
| (N) | CONST. 5" CONC. SIDEWALK | (Z) | CONST. CONC. LOADING ZONE WITH 7-INCH FACE | | |



SOUTH

13TH

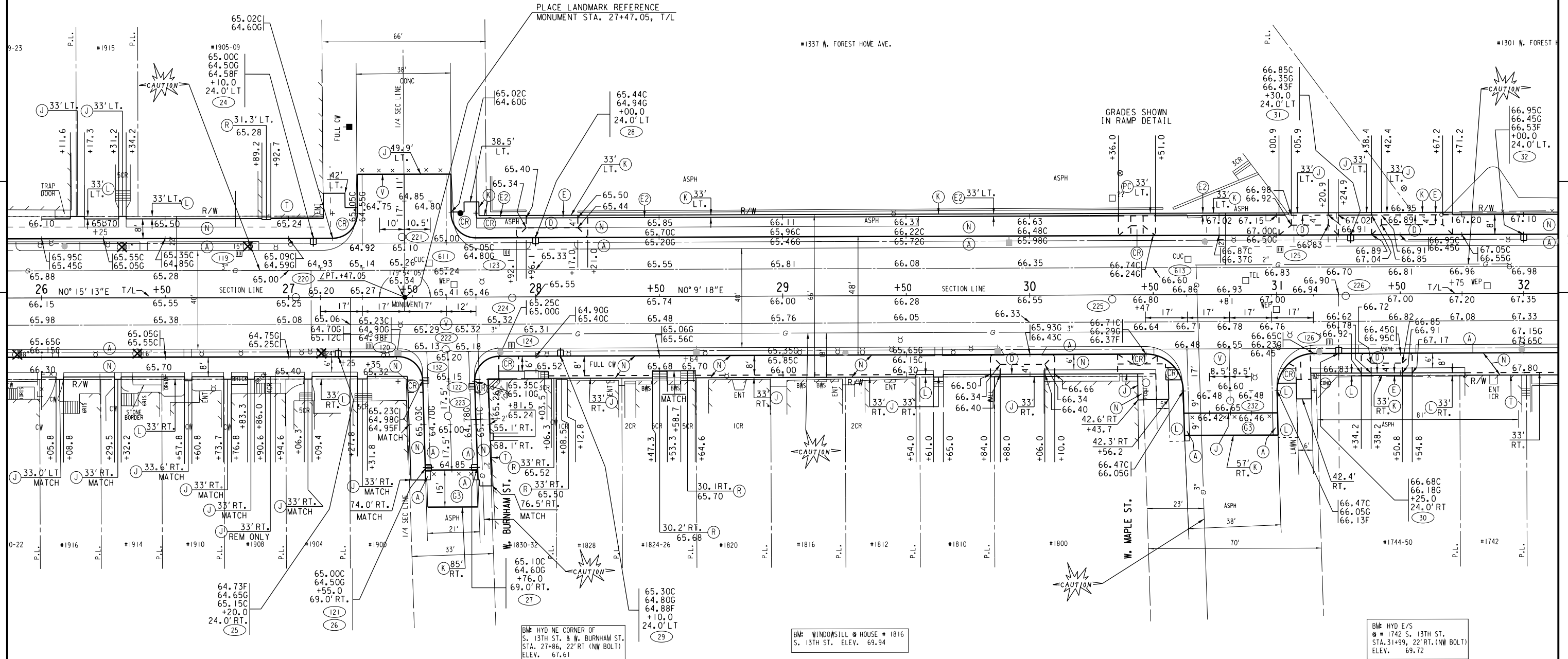
STREET

N

SEE CONST. DETAIL FOR
ADDITIONAL INFORMATION
ON CURB RAMPSSEE CONST. DETAIL FOR
ADDITIONAL INFORMATION
ON CURB RAMPSPLACE LANDMARK REFERENCE
MONUMENT STA. 27+47.05, T/L

#1337 W. FOREST HOME AVE.

#1301 W. FOREST H



- (A) CONST. CONC. CURB & GUTTER 31-INCH
(B) CONST. CONC. DRIVEWAY FLARED (7-INCH)
(C) REMOVE & PLACE VT CONCRETE
(D) REMOVE & PLACE 3\" ASPH. SURFACE ON VT CONC. BASE
(E) REMOVE & PLACE 2\" ASPH. SURFACE ON VT CONC. BASE

- (G) REMOVE ASPHALT PARTIAL DEPTH TO OBTAIN 3\" MIN. ASPH. OVERLAY
(J) SAW FULL DEPTH CONCRETE
(K) SAW ASPHALT
(L) GRADE & PLACE 4\" TOPSOIL, SOD & FERTILIZER
(N) CONST. 5\" CONC. SIDEWALK

- (P) REMOVE & PLACE VT ASPH. SURFACE ON VT CRUSH STONE BASE
(PC) PEDESTRIAN CURB SEE RAMP DETAILS
(Q) ASPHALT SHIM
(R) SAW FULL DEPTH AT BASE OF CONC. STEP
(T) SAW FULL DEPTH AT OR NEAR BUILDING, OR WALL

- (V) CONST. 7.0' CONC. PAVEMENT ON 6\" STONE BASE
(VB) CONST. 8\" CONC. PAVEMENT
(VA) CONST. 7\" CONC. ALLEY PAVEMENT
(Y) CONST. SLOPED MEDIAN ISLAND NOSE
(Z) CONST. CONC. LOADING ZONE WITH 7-INCH FACE

- (5) CONST. CURB RAMP TYPE 5
(CR) SEE CURB RAMP DETAIL

STATE PROJECT NUMBER 2505-00-75

HWY: LOCAL STREET

COUNTY: MILWAUKEE

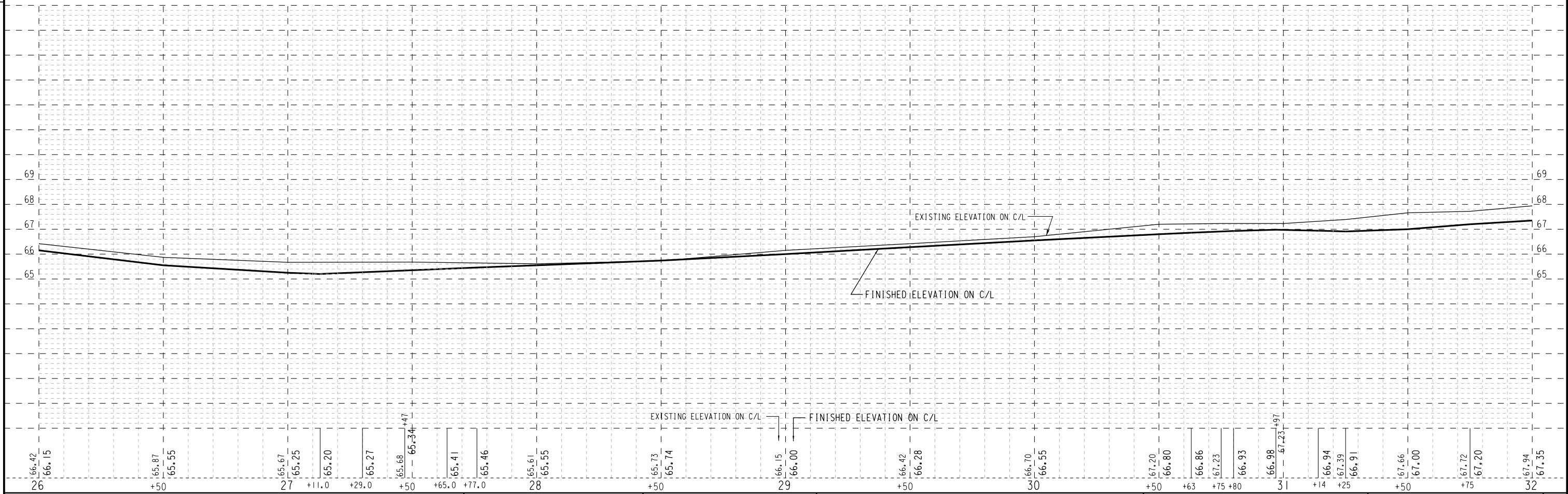
PLAN

SCALE FEET

0' 40'

SHEET NO: 133

E



SOUTH

13TH

STREET

SEE CONST. DETAIL FOR
ADDITIONAL INFORMATION
ON CURB RAMPS

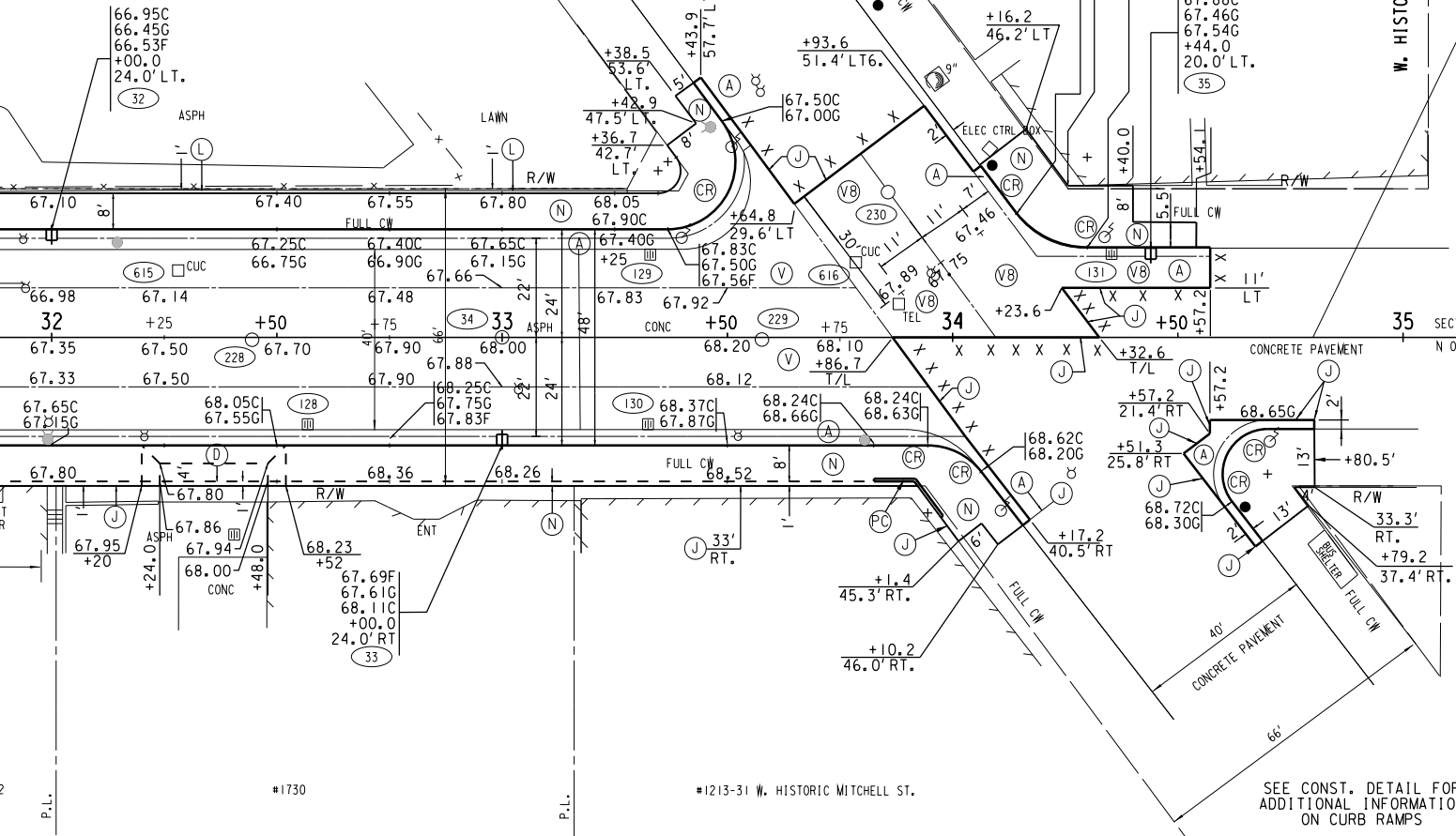
END PROJECT-S. 13TH ST.
STA. 34 + 80.00 T/L



#1301 W. FOREST HOME AVE.

BM: HYD SW CORNER
S. 13TH ST & W. FOREST HOME AVE.
STA. 33+46.47' LT.
ELEV. 70.10

BM: HYD NE CORNER OF
S. 13TH ST. & W. MITCHELL ST.
ELEV= 71.50



- (5) CONST. CURB RAMP TYPE 5
- (CR) SEE CURB RAMP DETAIL
- (A) CONST. CONC. CURB & GUTTER 31-INCH
- (C) CONST. CONC. DRIVEWAY FLARED (7-INCH)
- (VT) REMOVE & PLACE VT CONCRETE
- (E) REMOVE & PLACE 3" ASPH. SURFACE ON VT CONC. BASE
- (E2) REMOVE & PLACE 2" ASPH. SURFACE ON VT CONC. BASE
- (G3) REMOVE ASPHALT PARTIAL DEPTH TO OBTAIN 3" MIN. ASPH. OVERLAY
- (J) SAW FULL DEPTH CONCRETE
- (K) SAW ASPHALT
- (L) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
- (N) CONST. 5" CONC. SIDEWALK
- (P) REMOVE & PLACE VT ASPH. SURFACE ON VT CRUSH STONE BASE
- (PC) PEDESTRIAN CURB SEE RAMP DETAILS
- (Q) ASPHALT SHIM
- (R) SAW FULL DEPTH AT BASE OF CONC. STEP
- (T) SAW FULL DEPTH AT OR NEAR BUILDING, OR WALL
- (V) CONST. 7.0' CONC. PAVEMENT ON 6' STONE BASE
- (VB) CONST. 8' CONC. PAVEMENT
- (VA) CONST. 7" CONC. ALLEY PAVEMENT
- (Y) CONST. SLOPED MEDIAN ISLAND NOSE
- (Z) CONST. CONC. LOADING ZONE WITH 7-INCH FACE

STATE PROJECT NUMBER 2505-00-75

- -

HWY: LOCAL STREET

COUNTY: MILWAUKEE

PLAN

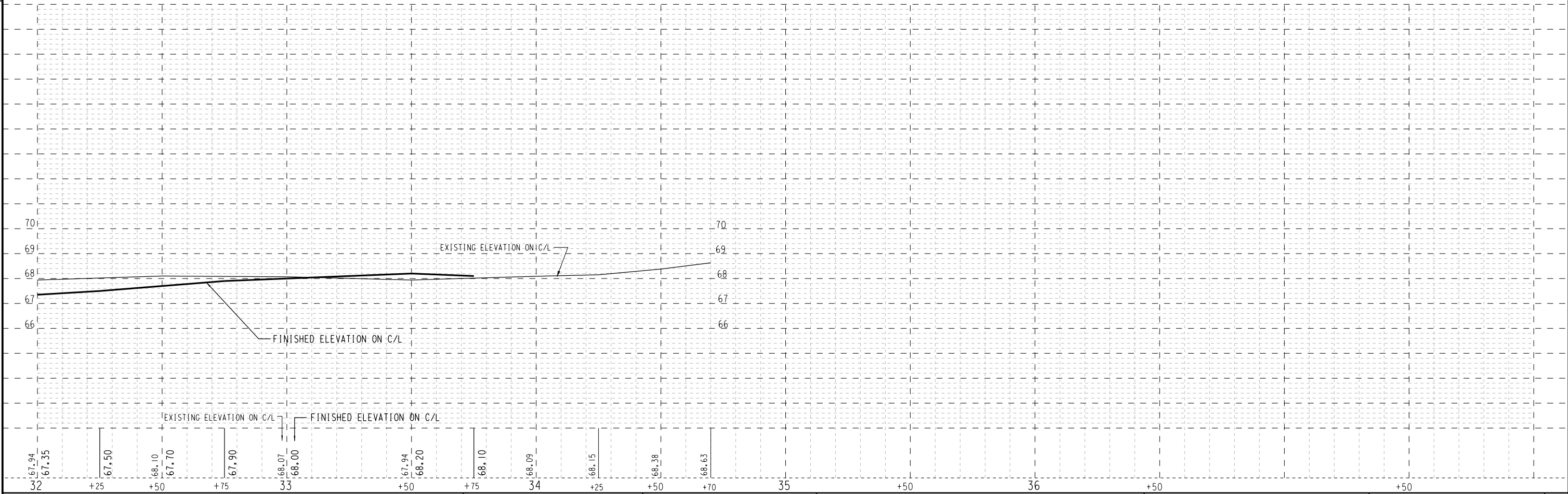
SCALE FEET



SHEET NO:

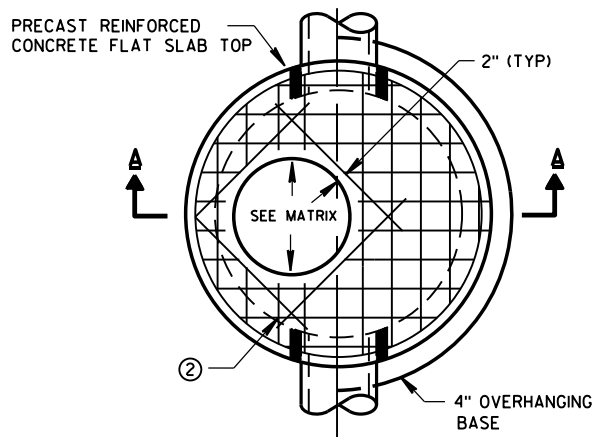
135

E

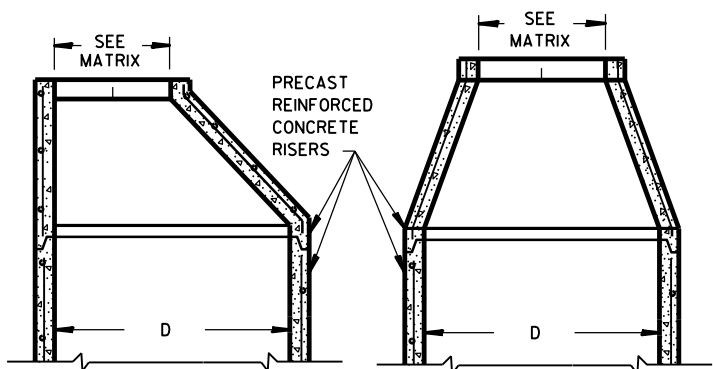


Standard Detail Drawing List

08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08D05-16B	CURB RAMPS TYPES 2 AND 3
08D05-16C	CURB RAMPS TYPES 4A AND 4A1
08D05-16D	CURB RAMPS TYPE 4B AND 4B1
08D05-16E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
09B02-09	CONDUIT
11B02-02	CONCRETE MEDIAN NOSE
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C18-03A	CONCRETE PAVEMENT JOINTING
13C18-03B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-03C	CONCRETE PAVEMENT JOINT TIES
13C18-03D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C11-05	FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES
15C29-03C	URBAN BICYCLE LANE MARKING
15C29-03D	URBAN BICYCLE LANE MARKING
15C29-03E	PAVEMENT MARKING FOR BIKE LANES
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D30-02A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-02B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-02C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS

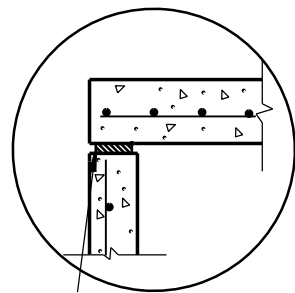


PLAN VIEW CIRCULAR OPENING

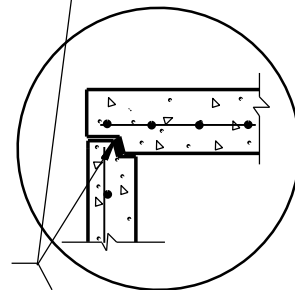


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

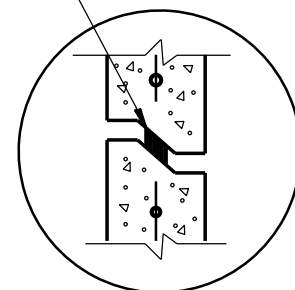
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



TOP WITH PLAIN END JOINT



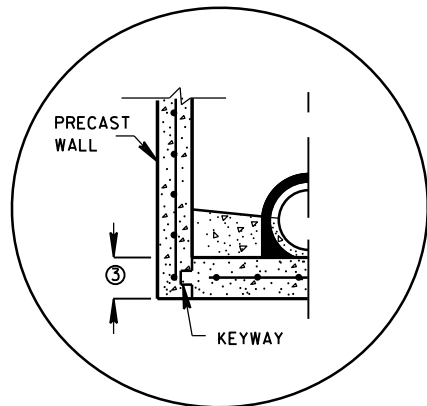
TOP WITH TONGUE AND GROOVE JOINT



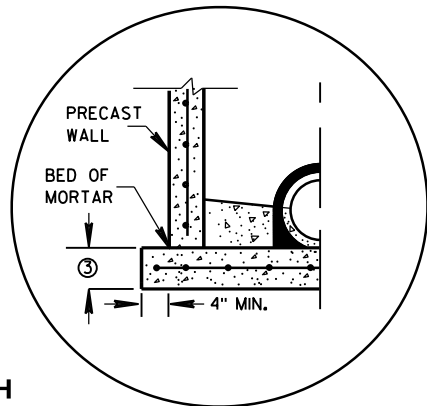
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

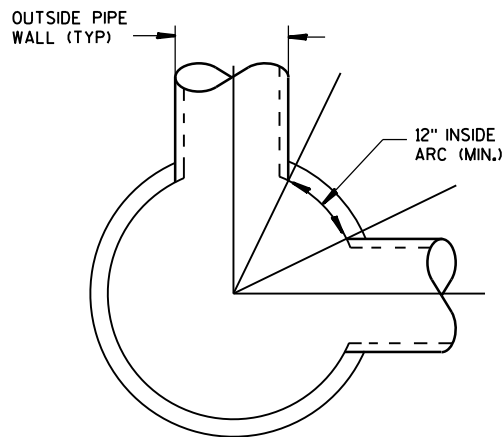


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

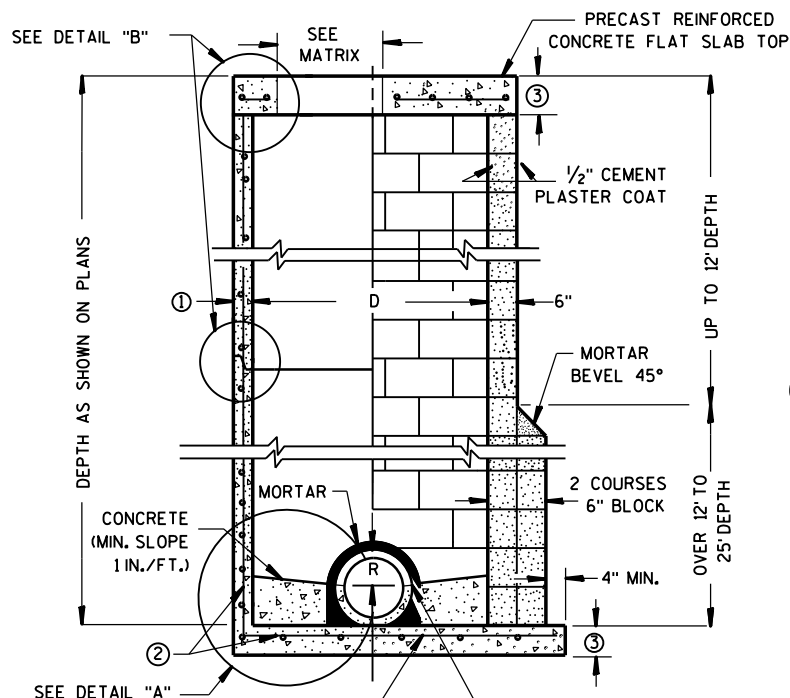


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"



CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

SPLIT PIPE OR FORM CONCRETE TO FIT

PRECAST REINFORCED CONCRETE BLOCK WITH CONCRETE WITH MONOLITHIC BASE CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

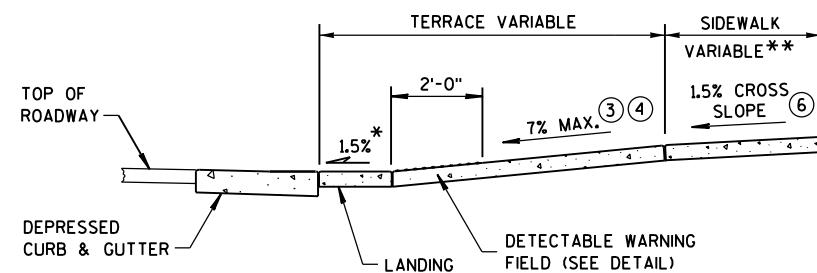
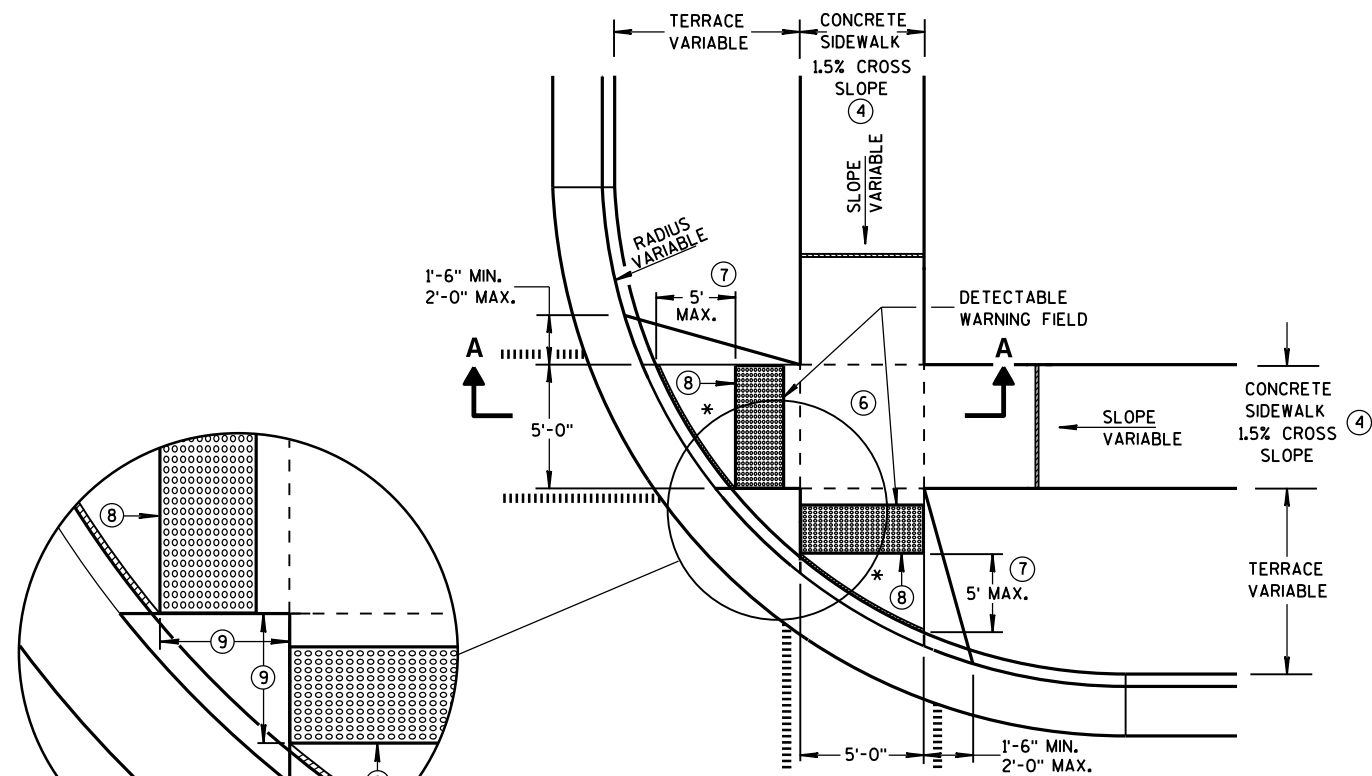
PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

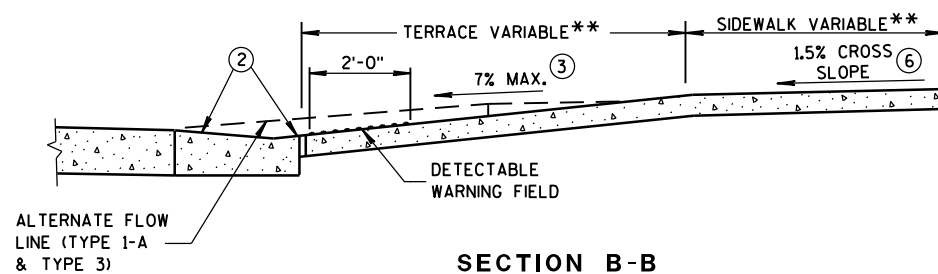
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 138
FHWA



** WIDTH SHOWN ELSEWHERE
IN THE PLANS



GENERAL NOTES

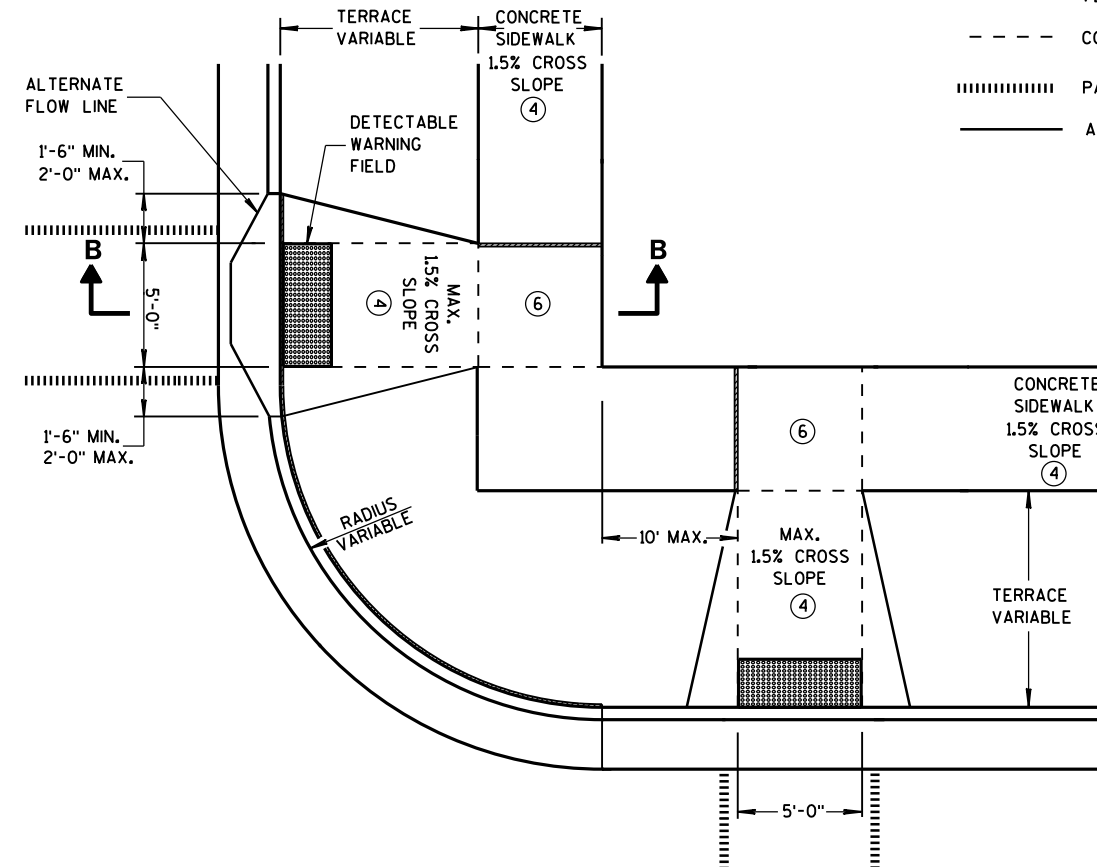
USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).
- ⑦ WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. 2" MINIMUM CURB HEIGHT.

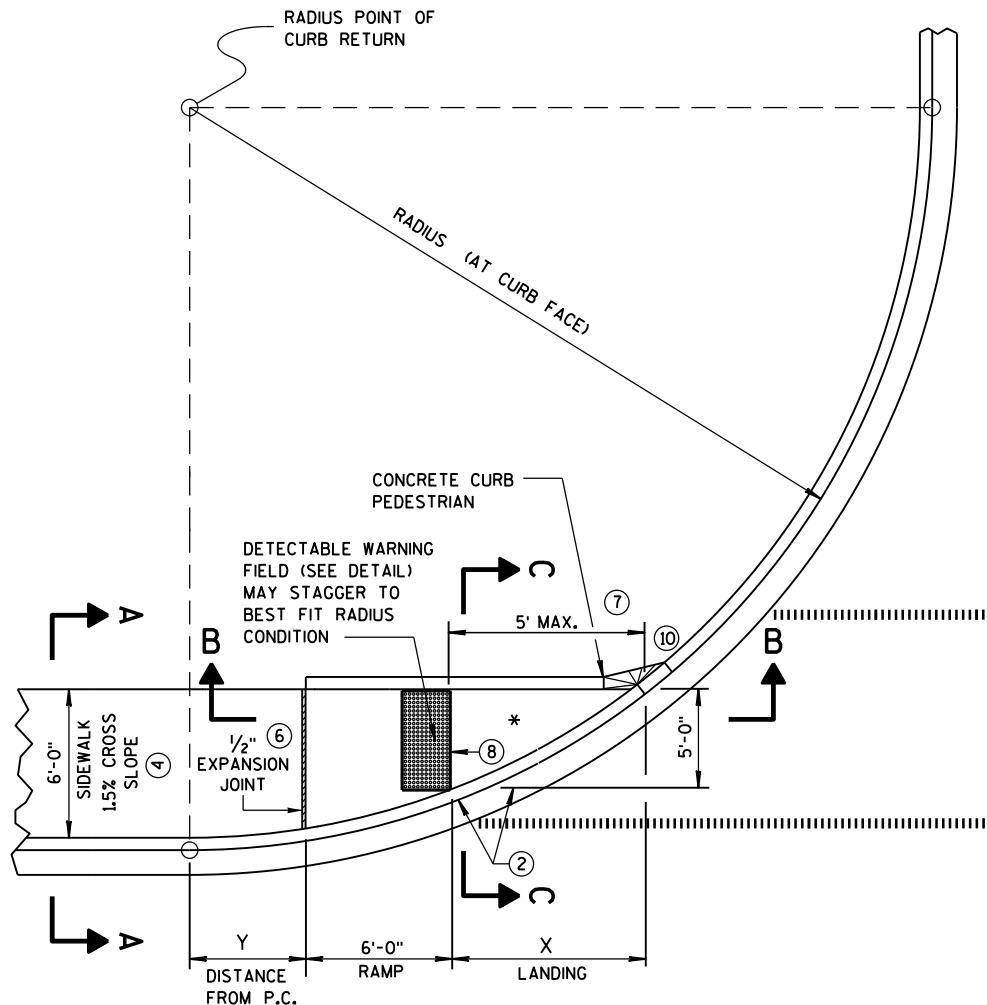
LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

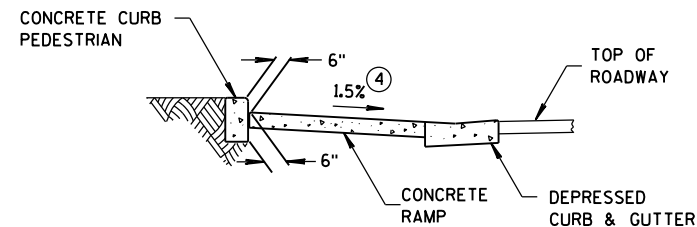


CURB RAMPS
TYPES 2 AND 3

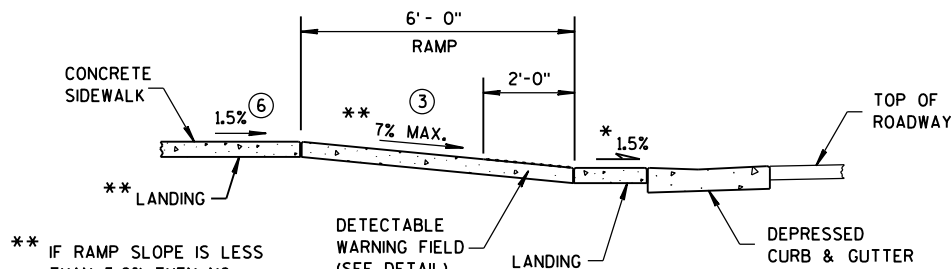
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 139



CURB RAMP TYPE 4A
PLAN VIEW



SECTION C-C FOR TYPE 4A



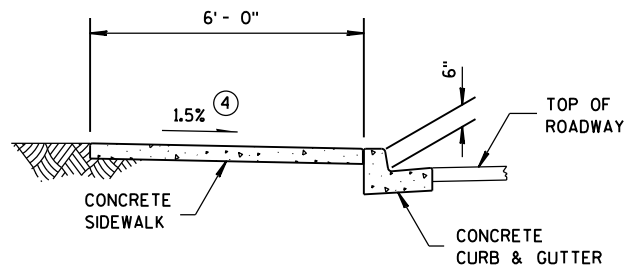
SECTION B-B FOR TYPE 4A

** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

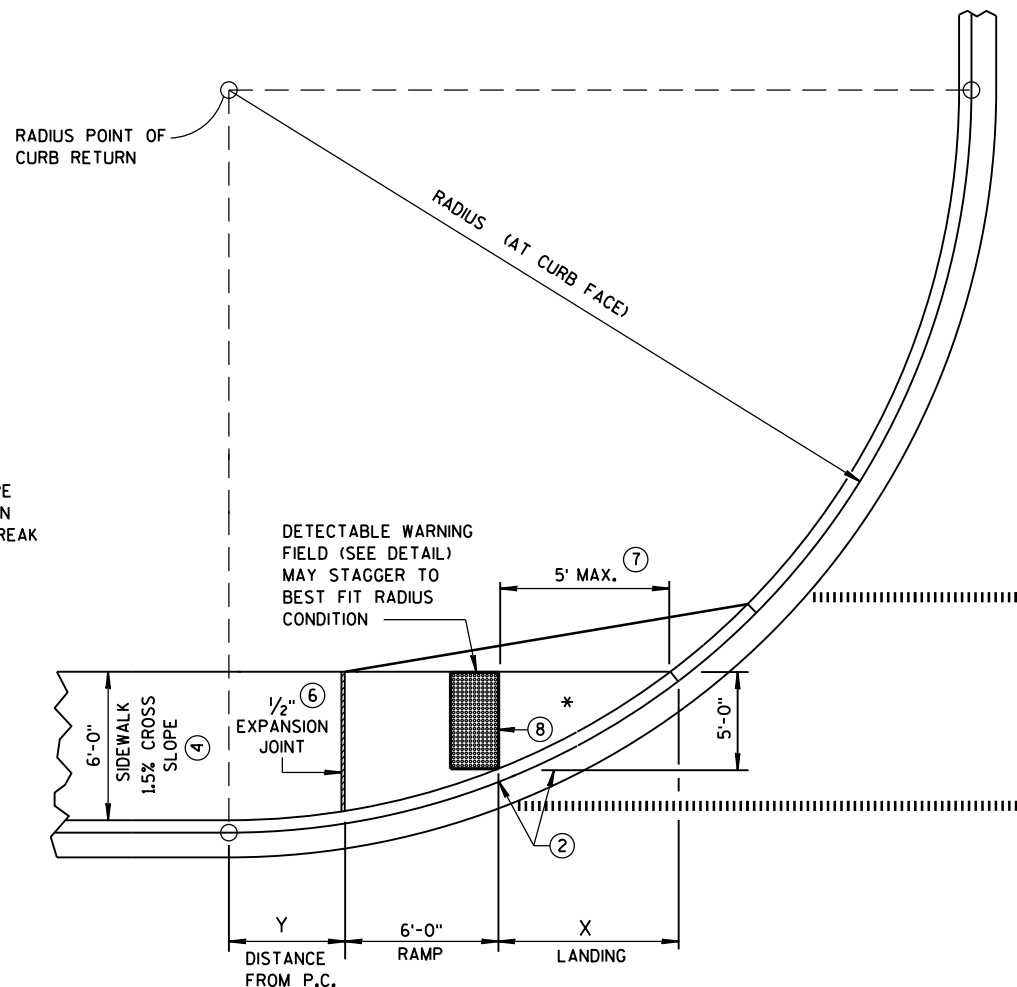
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1 3/4"	2'-7 1/4"
30 FEET	7'-11 3/4"	4'-8 1/4"
40 FEET	9'-5 1/4"	6'-5"
50 FEET	10'-8 3/4"	7'-11 1/4"
60 FEET	11'-10 1/4"	9'-3 1/2"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



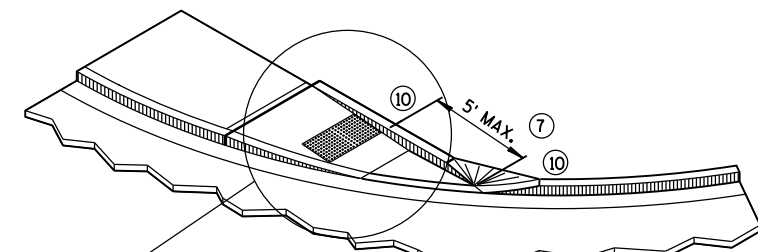
CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

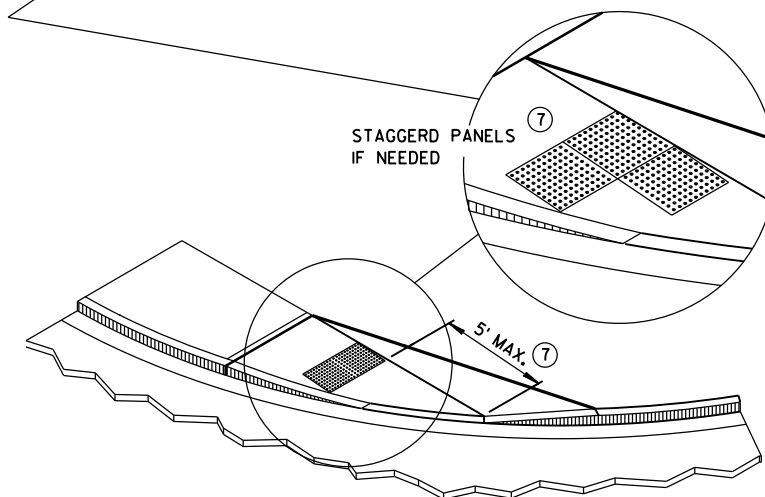
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.
- ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).
- WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



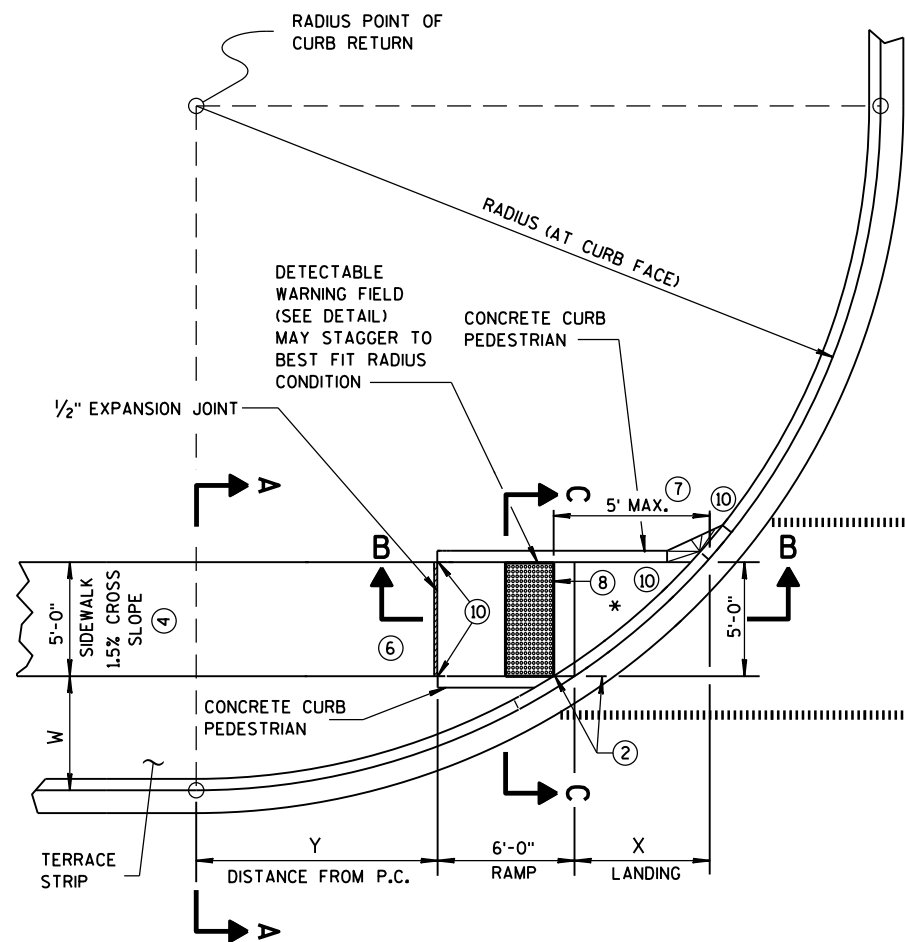
ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

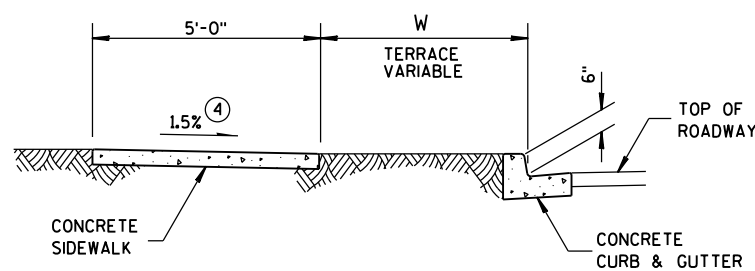
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

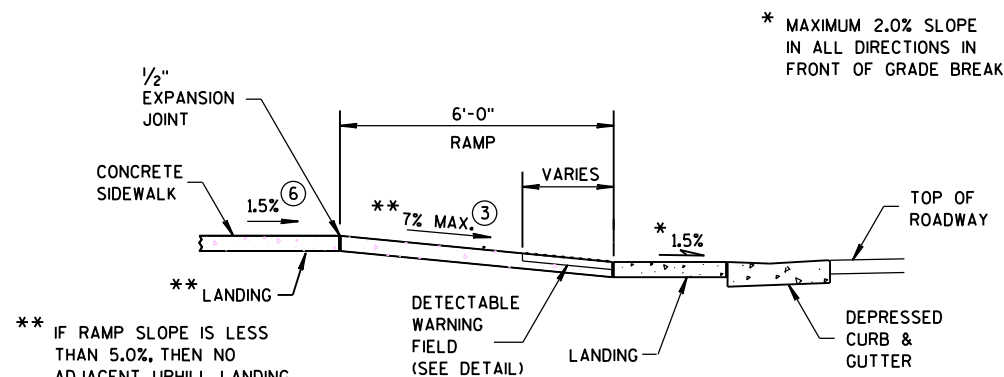
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**CURB RAMP TYPE 4B
PLAN VIEW**



SECTION A-A FOR TYPE 4B

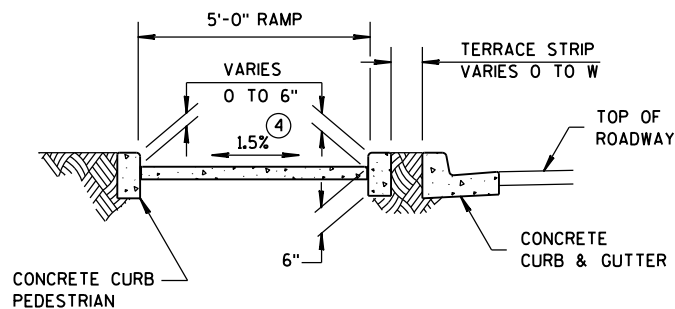


SECTION B-B FOR TYPE 4B

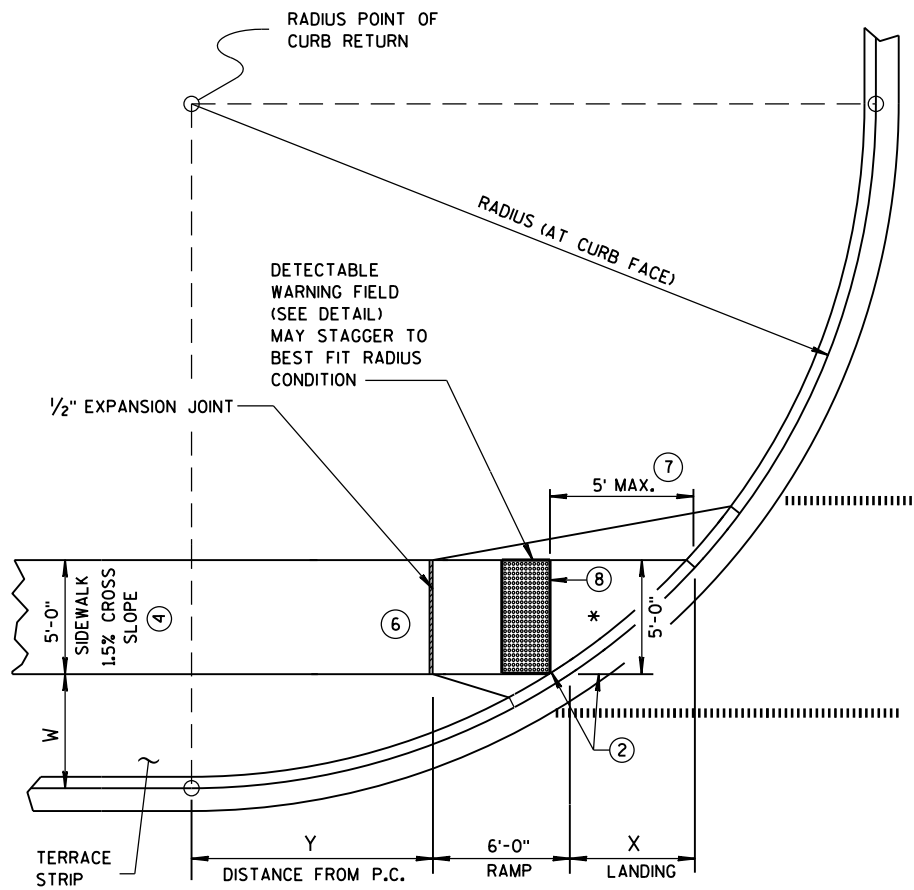
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

- LEGEND**
- 1/2" EXPANSION JOINT-SIDEWALK
 - CONTRACTION JOINT FIELD LOCATED
 - PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B

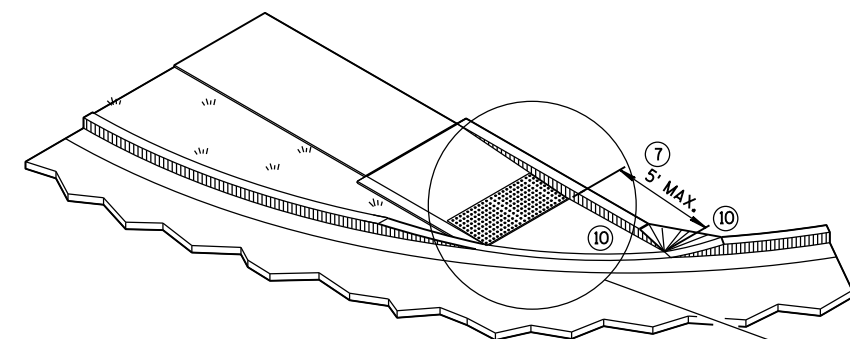


**CURB RAMP TYPE 4B1
PLAN VIEW**

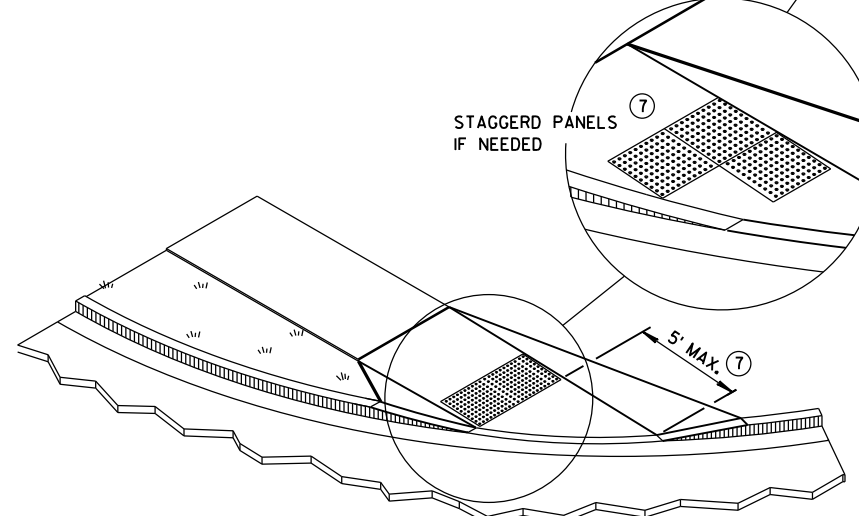
RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5 1/2"	4'-6 1/2"	4'-8 1/2"	6'-0"	4'-1"	7'-2 3/4"	3'-7"	8'-3 1/2"	3'-1 1/2"	9'-2 1/2"
30 FEET	7'-3 3/4"	7'-1"	6'-5 1/2"	8'-11 1/2"	5'-9 1/4"	10'-7"	5'-2 1/2"	12'-0"	4'-8 3/4"	13'-3 1/4"
40 FEET	8'-9 1/2"	9'-2 1/2"	7'-10"	11'-5 1/4"	7'-1"	13'-4 1/2"	6'-5 3/4"	15'-3/4"	5'-11 1/2"	16'-7 1/4"
50 FEET	10'-3/4"	11'-3/4"	9'-1/4"	13'-7 1/4"	8'-2 1/2"	15'-9 1/2"	7'-6 1/2"	17'-9"	6'-11 3/4"	19'-6 1/4"
60 FEET	11'-2 1/2"	12'-8 3/4"	10'-3/4"	15'-6 1/2"	9'-2 1/4"	17'-11 3/4"	8'-5 3/4"	20'-1 3/4"	7'-10 1/2"	22'-1 1/2"

GENERAL NOTES

- INTERMEDIATE RADII CAN BE INTERPOLATED
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS. DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- 2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.
 - 3 ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
 - 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
 - 6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).
 - 7 WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.
 - 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
 - 10 INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



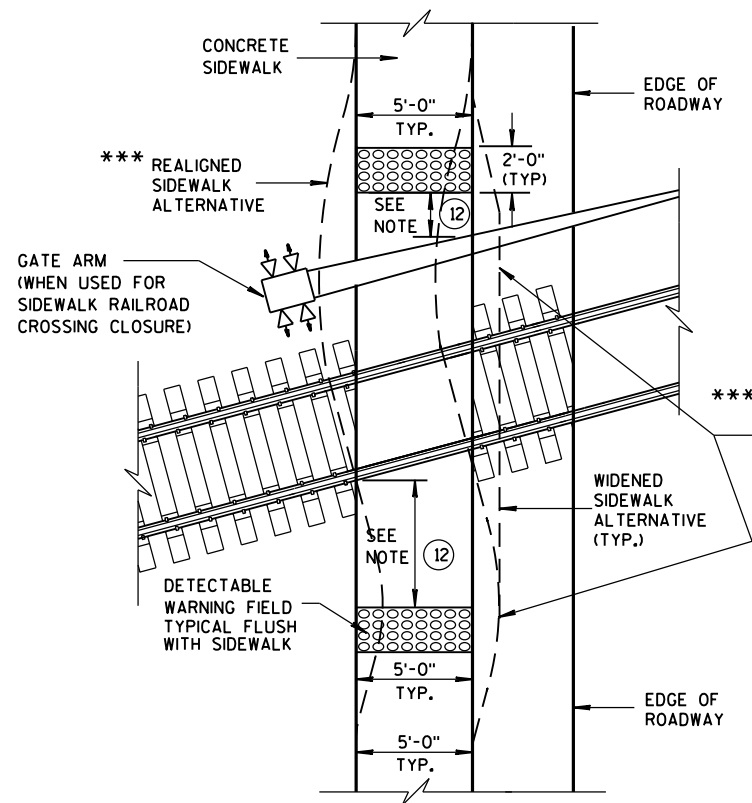
ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

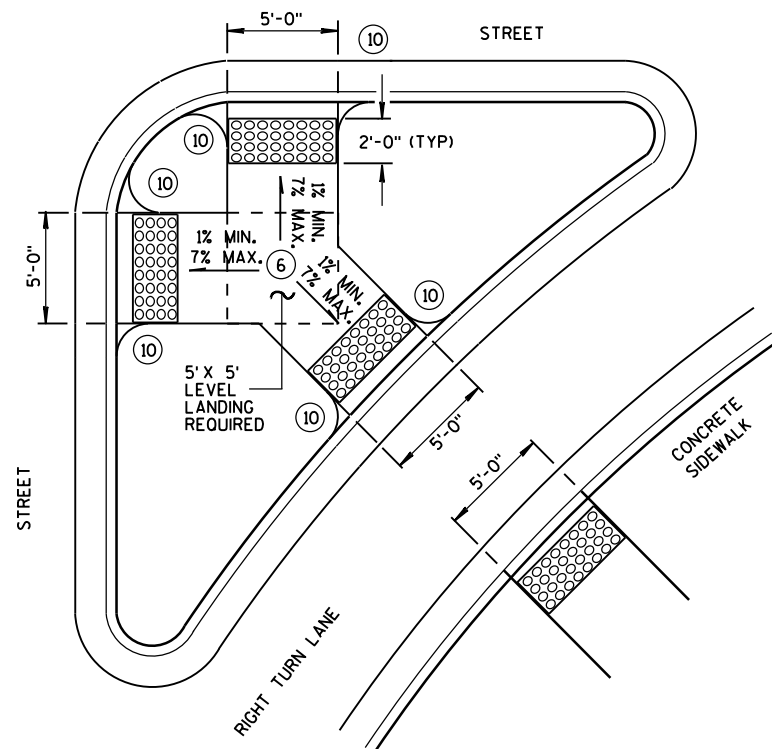
**CURB RAMPS
TYPE 4B AND 4B1**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 141

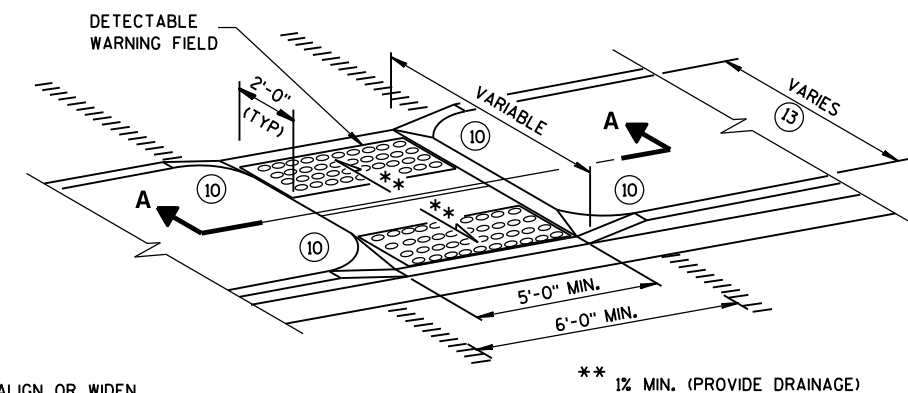


TYPE 8
DETECTABLE WARNINGS
AT RAILROAD CROSSING

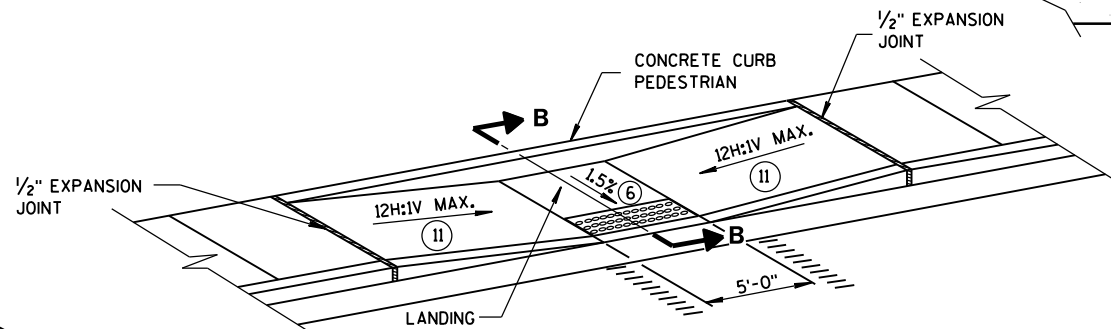
REFER TO GENERAL NOTES ② AND ③
FOR ALL ISLAND CURB RAMPS



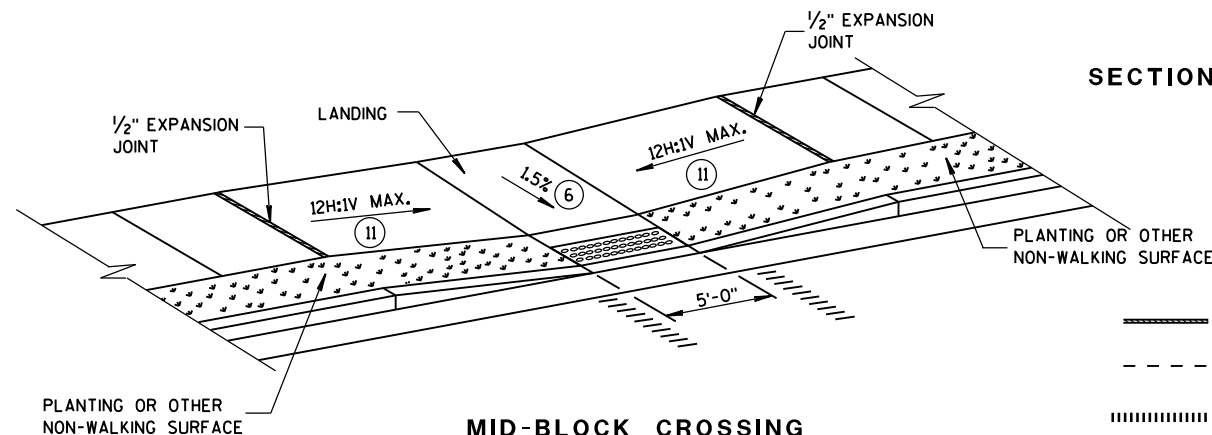
TYPE 6
DETECTABLE WARNING AT ISLANDS



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5



MID-BLOCK CROSSING
TYPE 7A

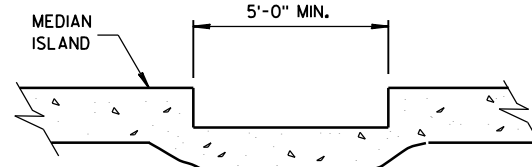


MID-BLOCK CROSSING
TYPE 7B

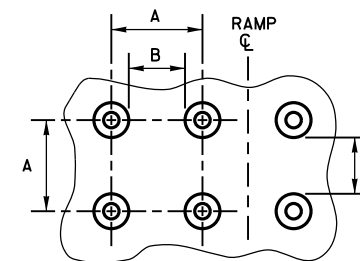
NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS
MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

GENERAL NOTES

- SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



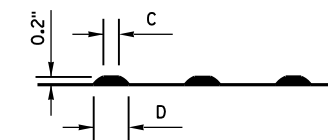
SECTION A-A



PLAN VIEW

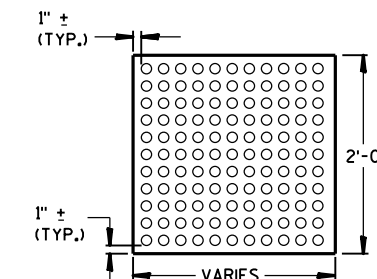
	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



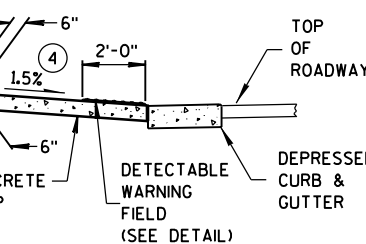
ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



PLAN VIEW
DETECTABLE WARNING
FIELD (TYPICAL)

SECTION B-B



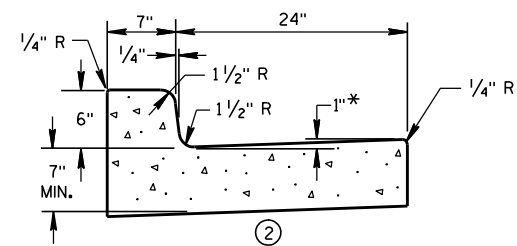
LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

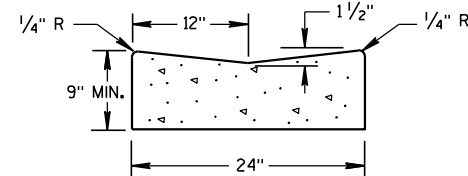
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

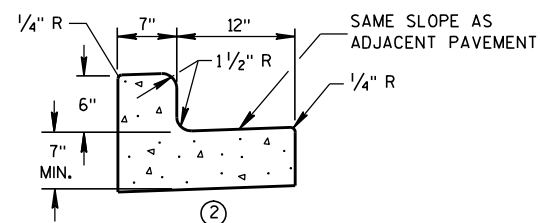
APPROVED
June, 2015 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS 142 INT
FHWA ENGINEER



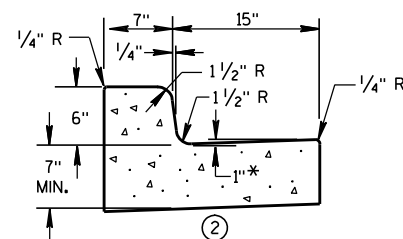
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

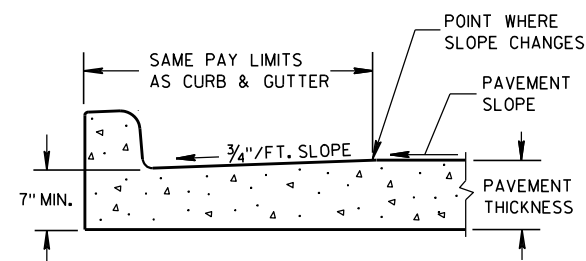


① CONCRETE CURB & GUTTER 19"

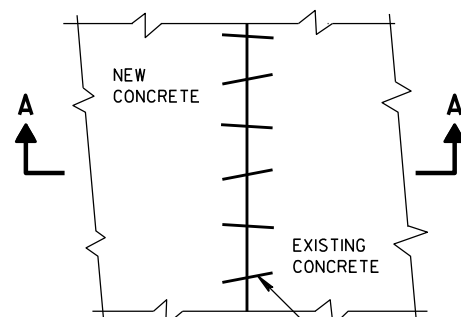


① CONCRETE CURB & GUTTER 22"

* TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



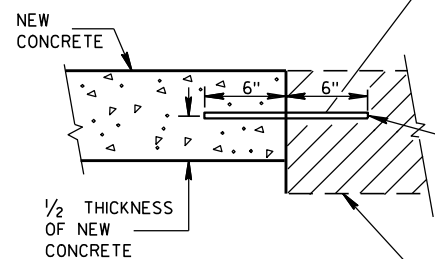
PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



PLAN VIEW

EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.

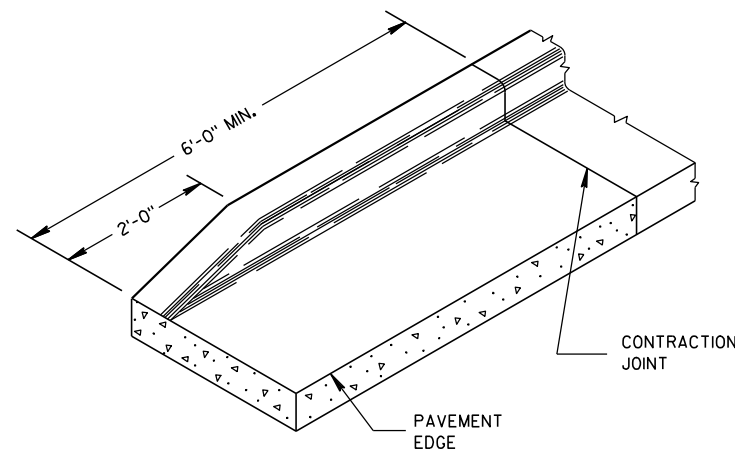
NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



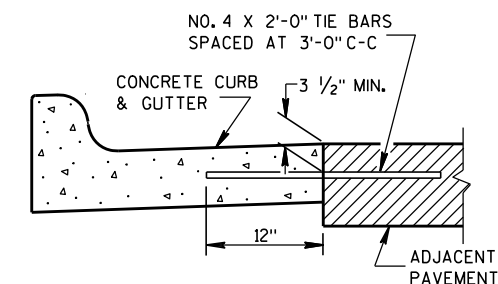
SECTION A-A
PAVEMENT TIES

THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

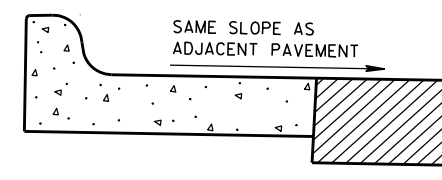
EXISTING CONCRETE



END SECTION CURB & GUTTER



① TYPICAL TIE BAR LOCATION



③ HIGH SIDE SECTION
(TYPICAL FOR ALL CURB & GUTTER)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURB.

- ① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.

CONCRETE GUTTER, CURB AND
GUTTER AND PAVEMENT TIES
(For Optional Use in Milwaukee Co. Only)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/22/2010

DATE

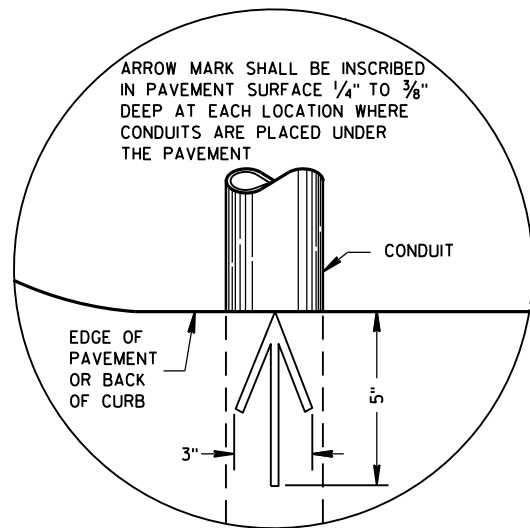
FHWA

/S/ Jerry Zonn

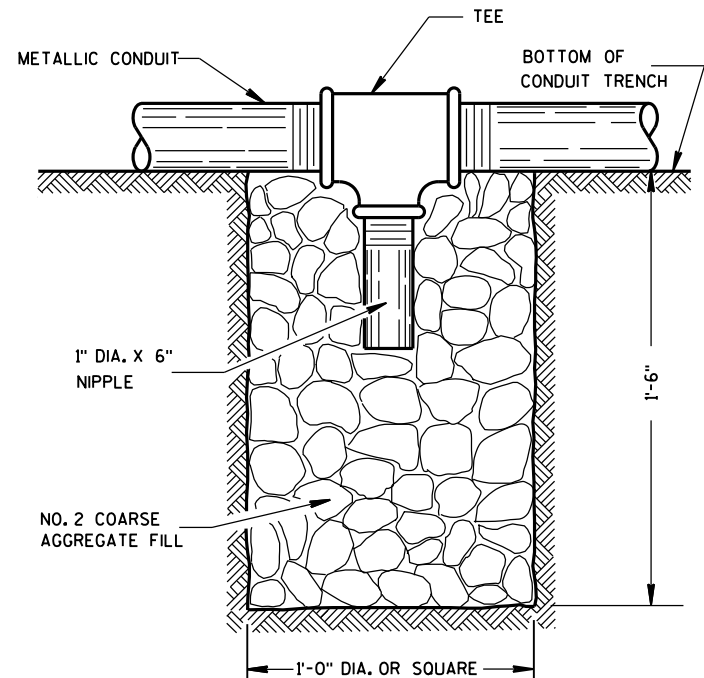
ROADWAY STANDARDS 143

ENGINEER

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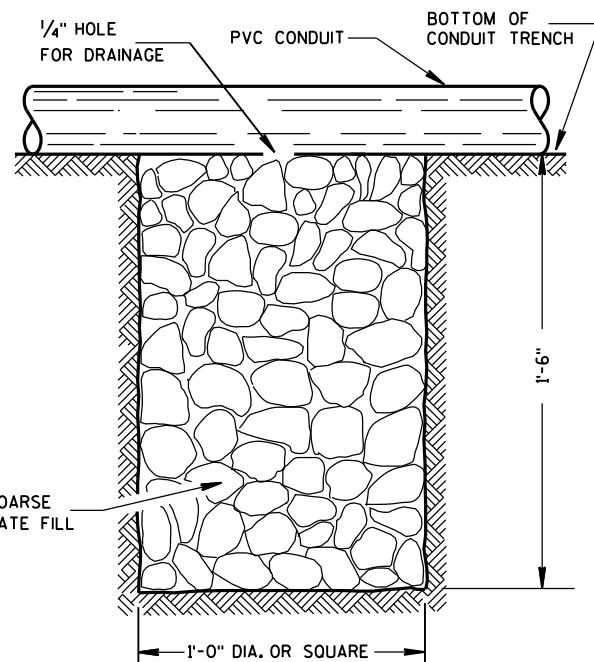


PLAN VIEW
ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

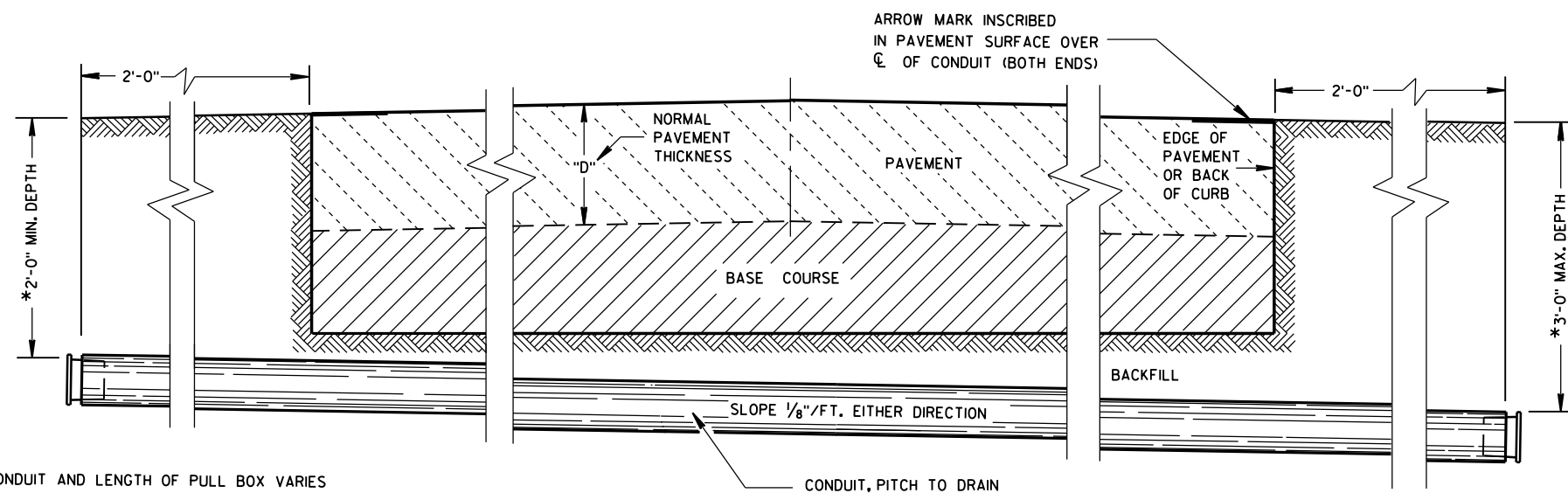
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



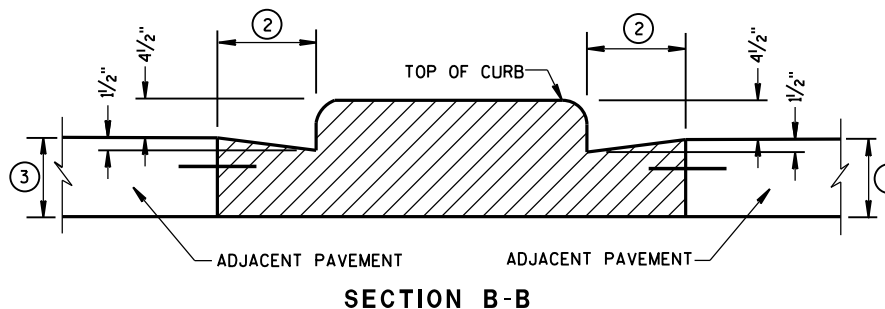
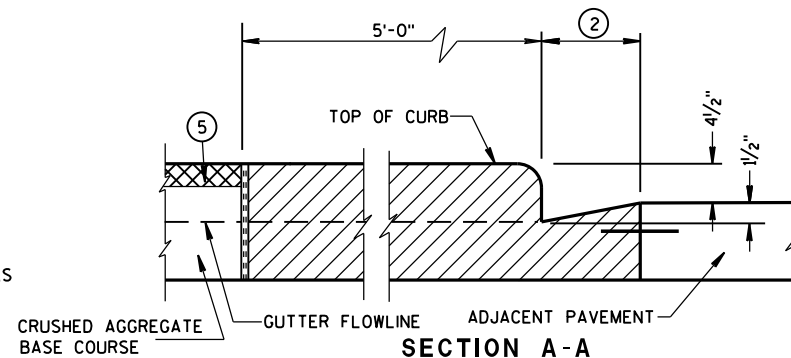
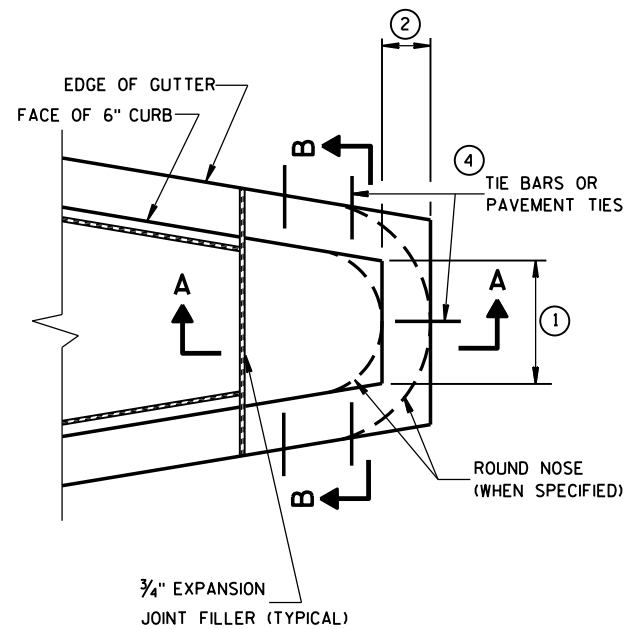
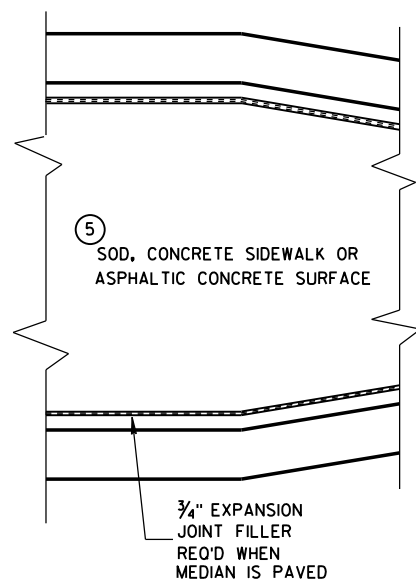
*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

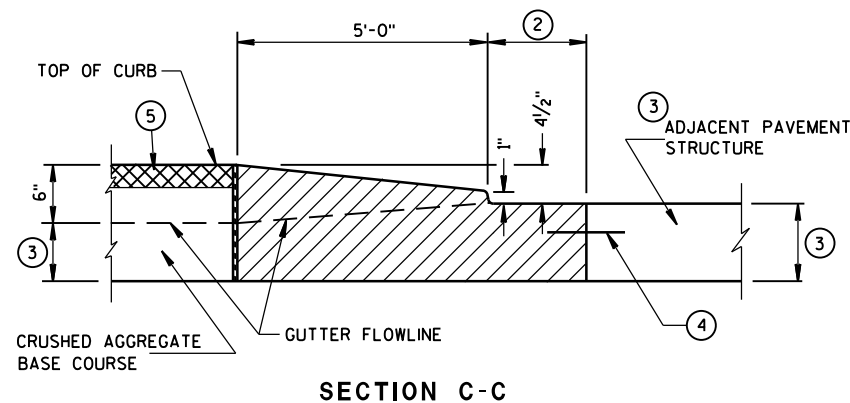
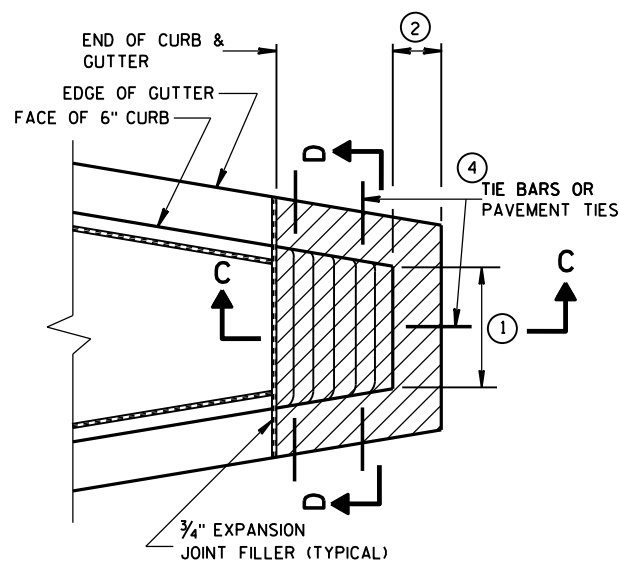
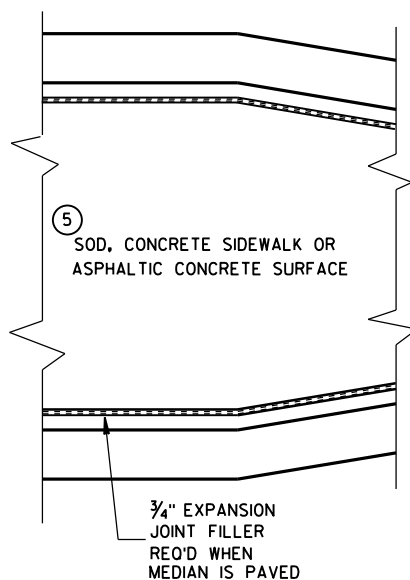
CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

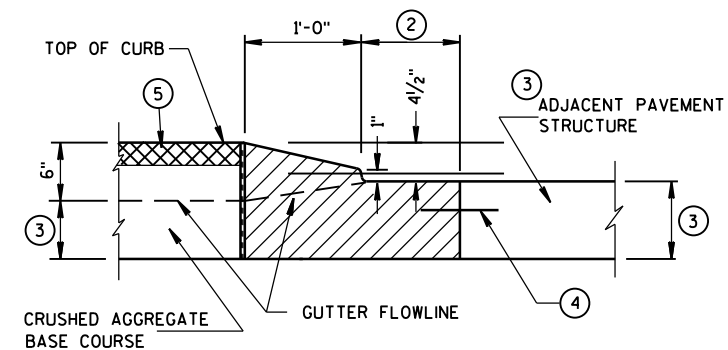
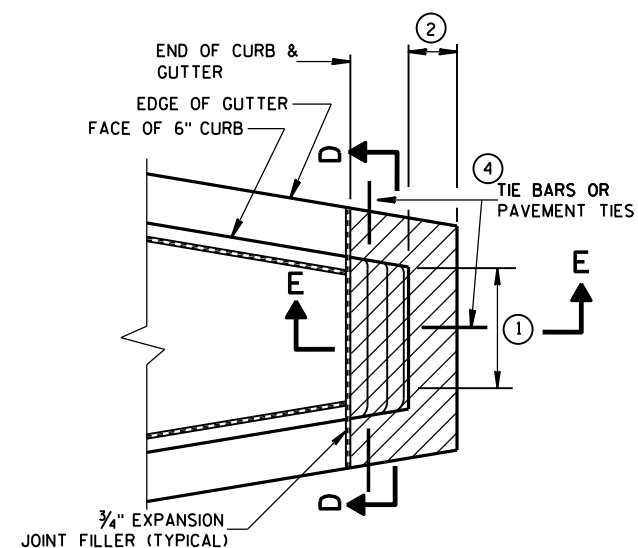
APPROVED
June, 2015 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL 144
FHWA



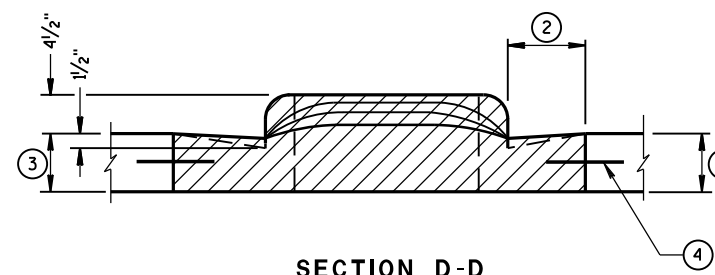
CONCRETE MEDIAN BLUNT NOSE DETAIL



CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN SLOPED NOSE TYPE 2



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- ② WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- ③ DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
 - (1) NEW OR EXISTING CONCRETE PAVEMENT.
 - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
 - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

- ④ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

- ⑤ SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

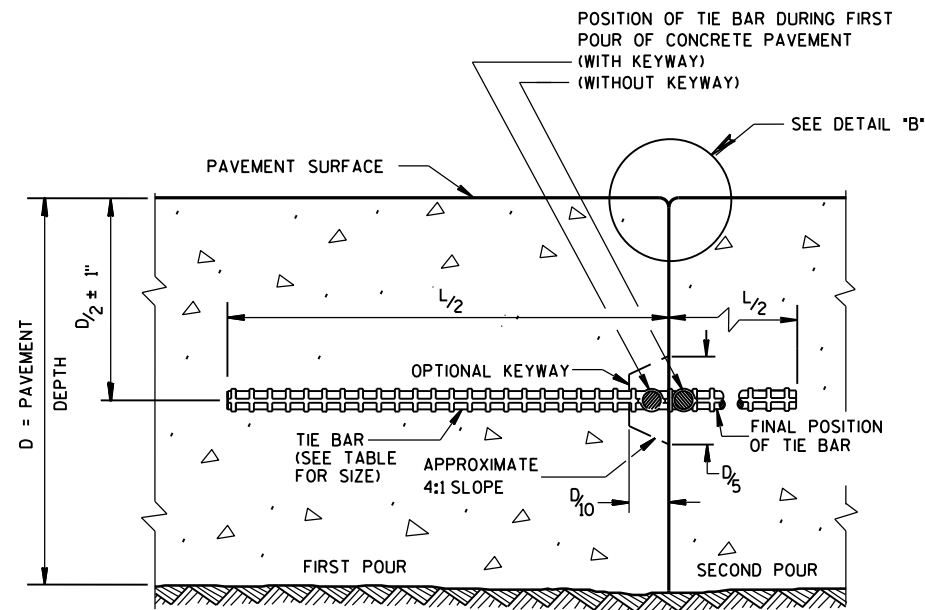
6/8/2006

DATE

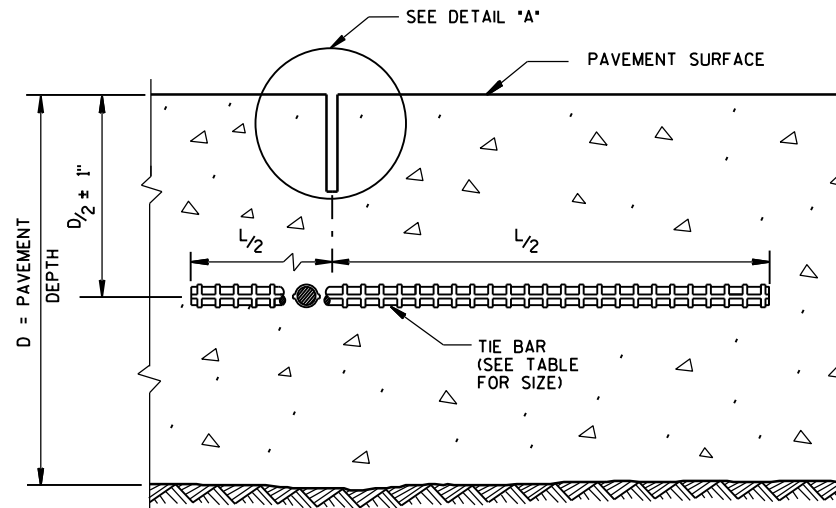
FHWA

/S/ Jerry H. Zoag
ROADWAY STANDARDS & 145
ENGINEER

4T



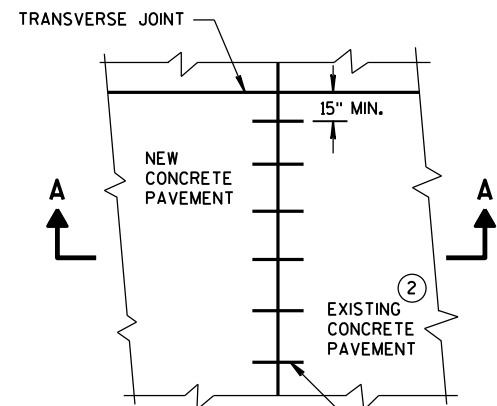
CONSTRUCTION JOINT



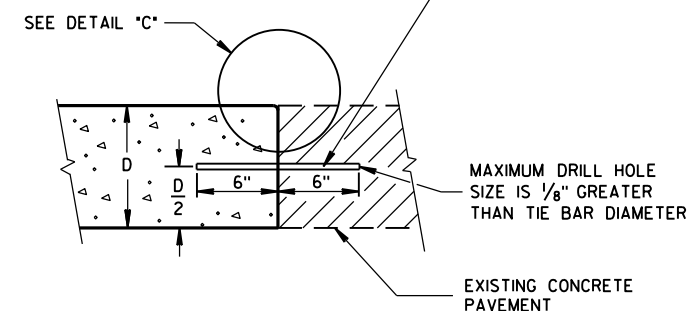
SAWED JOINT

GENERAL NOTES

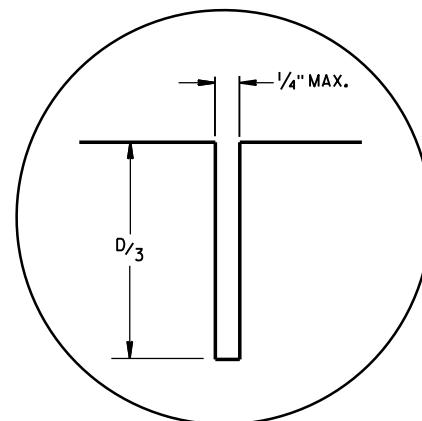
- DO NOT SEAL OR FILL LONGITUDINAL JOINTS.
- CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.
- CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.
- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.



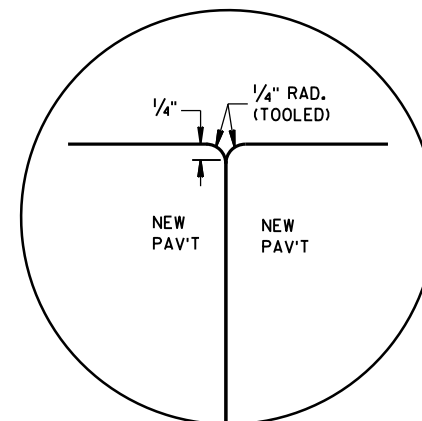
PLAN VIEW



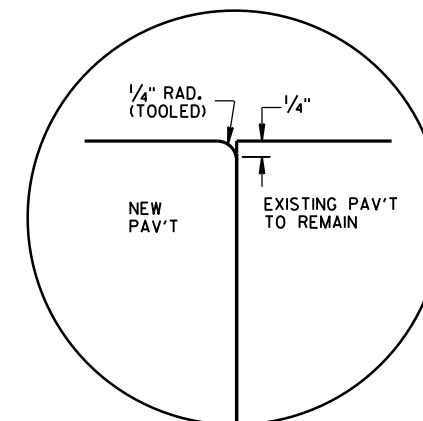
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"

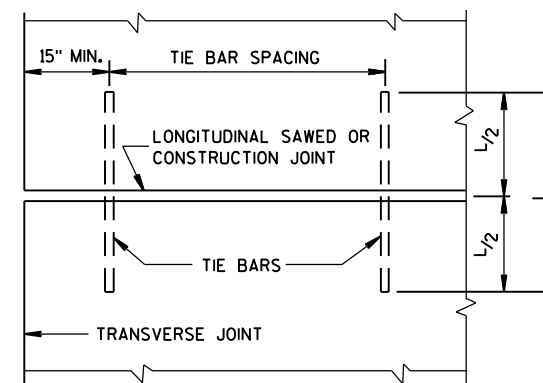


DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

- * SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)
- ** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

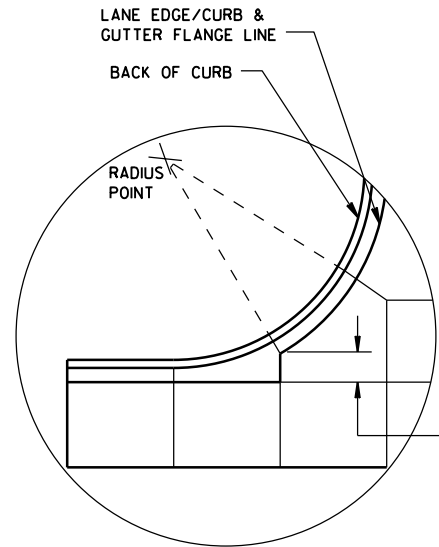


PLAN VIEW
SHOWING LOCATION OF TIE BARS

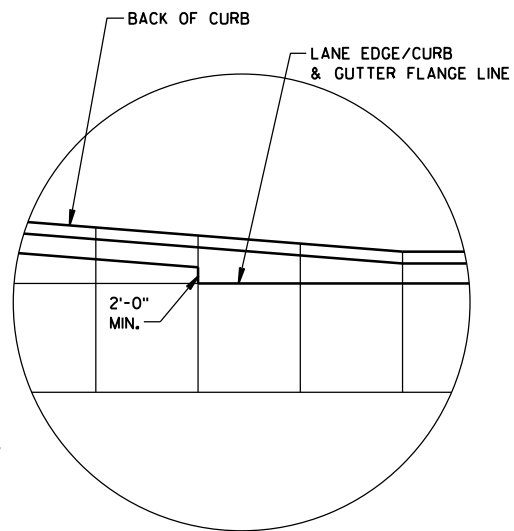
CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

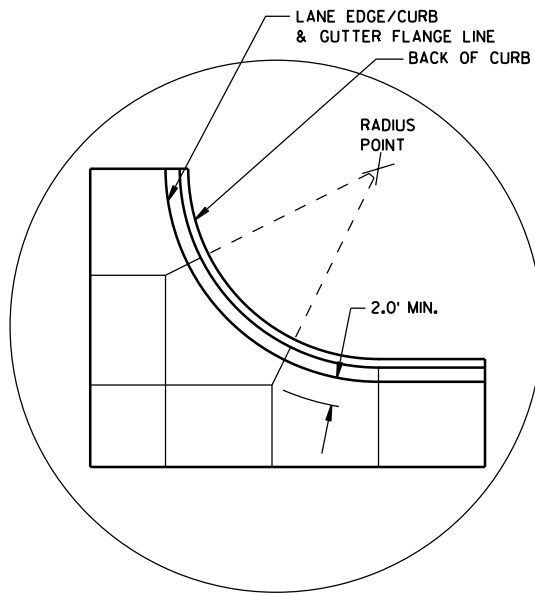
APPROVED
June, 2015 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPER 146
FHWA



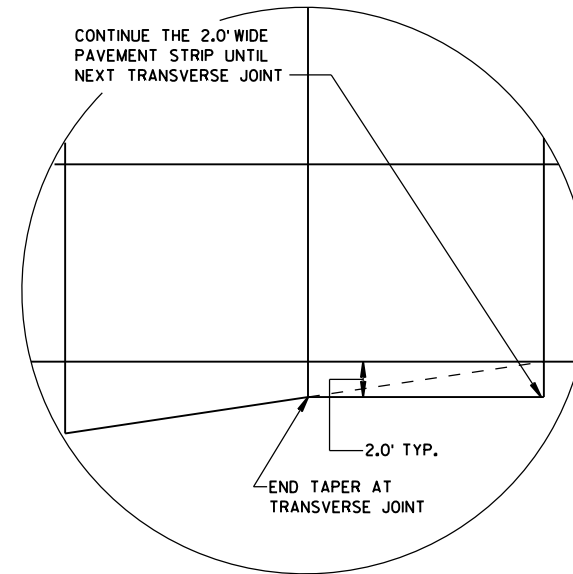
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

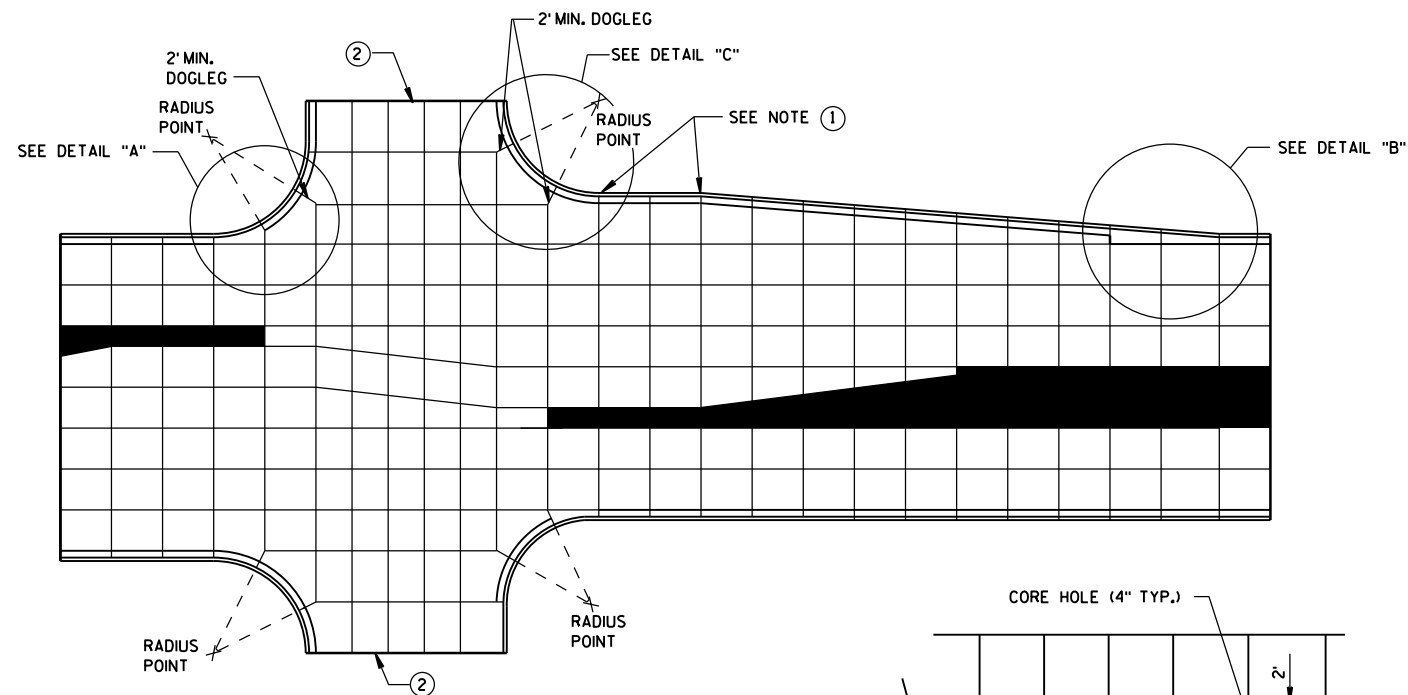
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

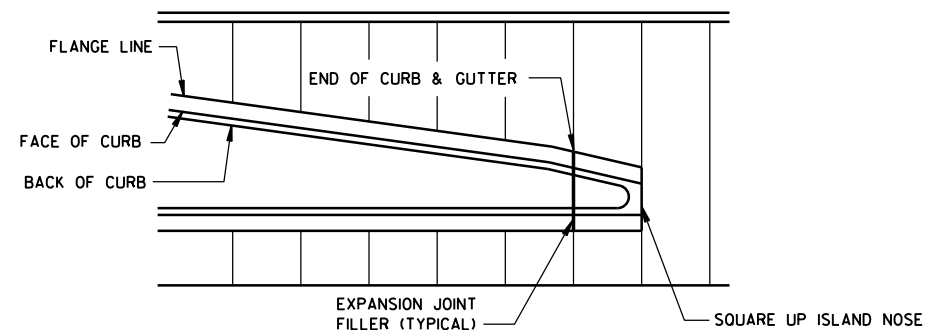
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

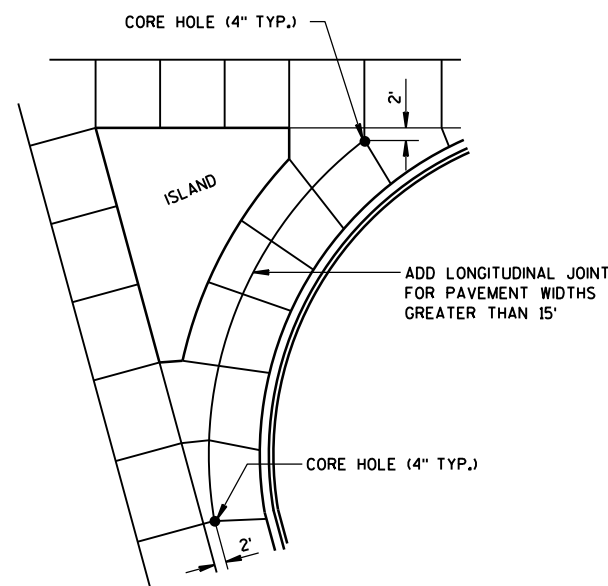
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



STANDARD INTERSECTION



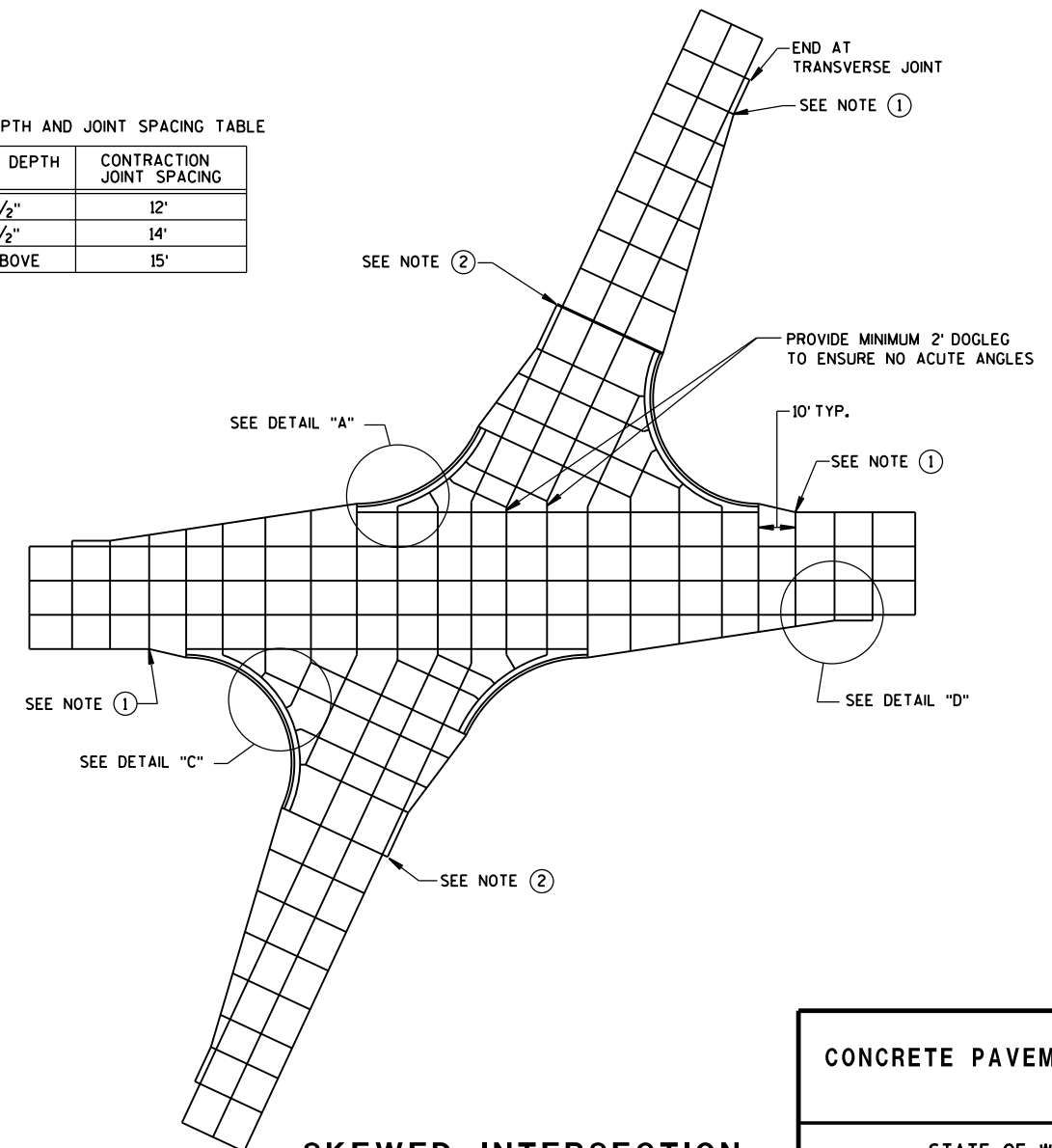
APPROACH TO MEDIAN



LARGE RIGHT TURN

PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



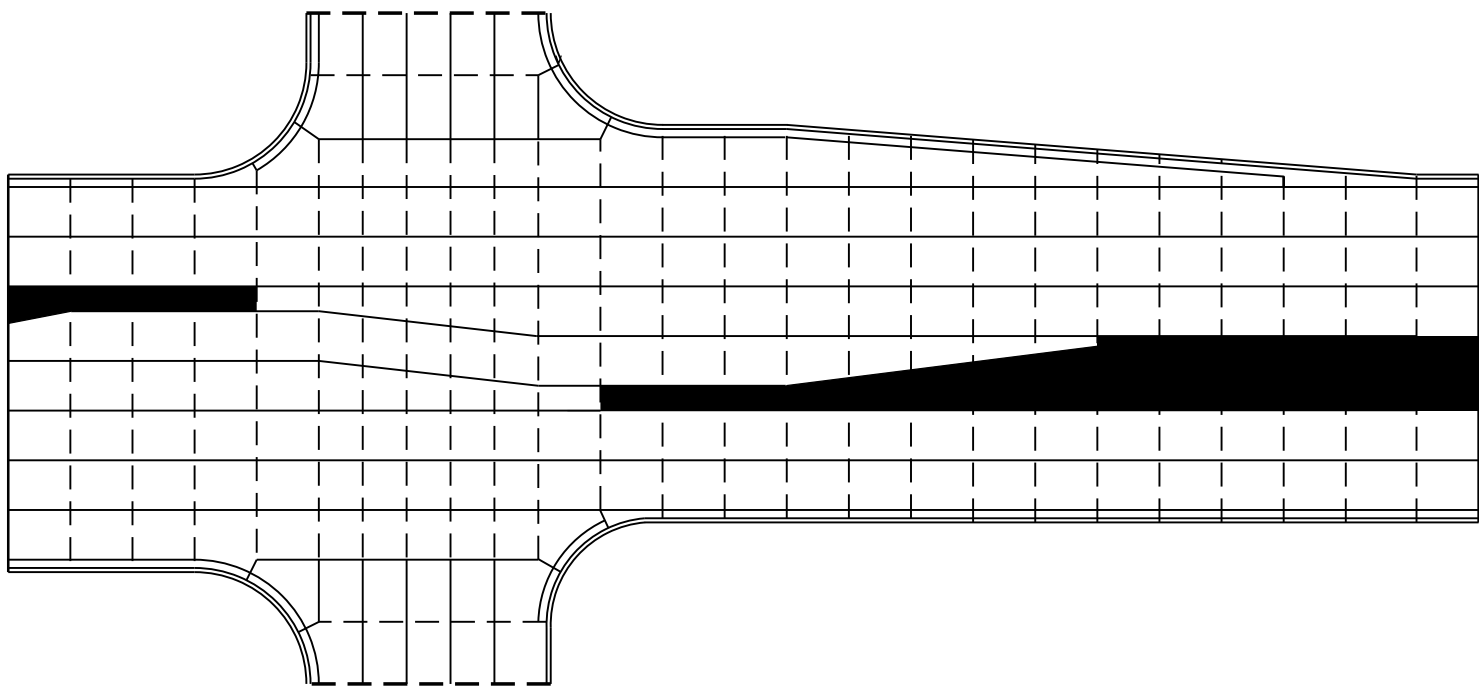
SKewed INTERSECTION

CONCRETE PAVEMENT JOINTING

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LEGEND

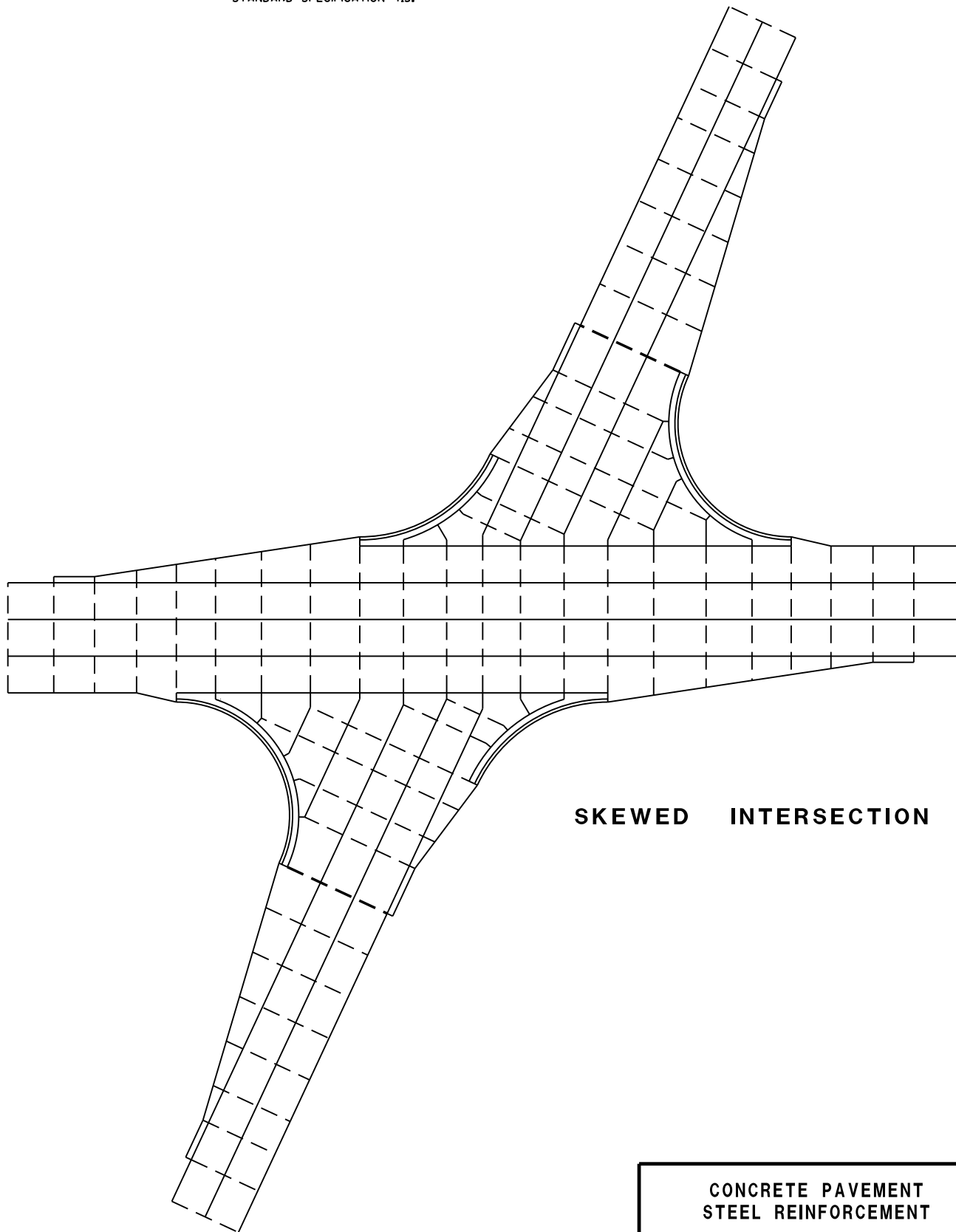
- POTENTIAL DOWELED EXPANSION JOINT
- DOWELED JOINT
- TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

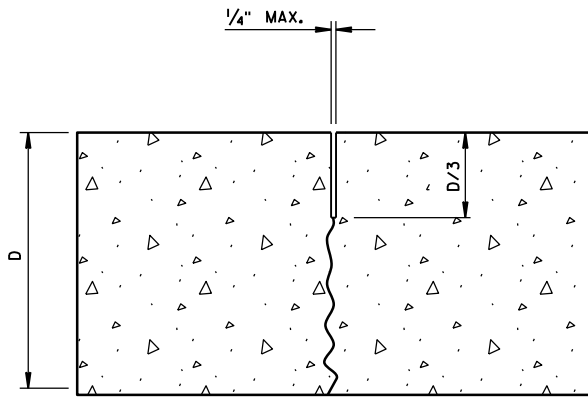


SKewed INTERSECTION

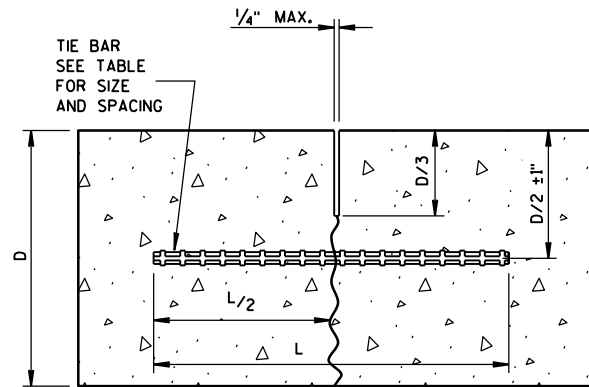
CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

148



UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

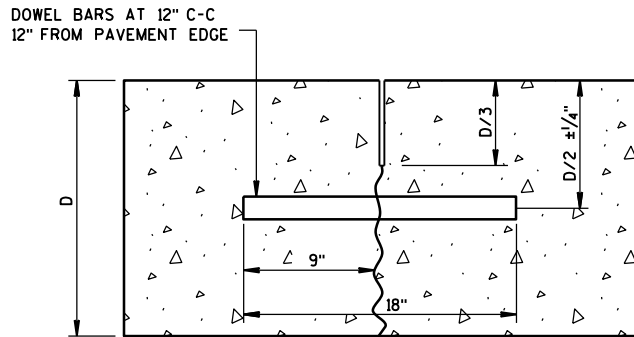
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

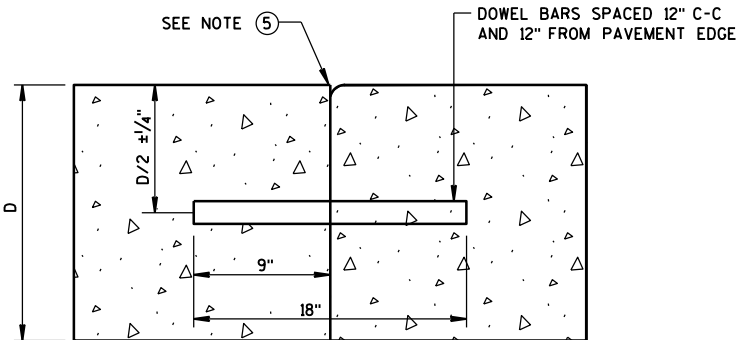
- ① USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- ② SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
- ③ LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
- ④ CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
- ⑤ IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.
- ⑥ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



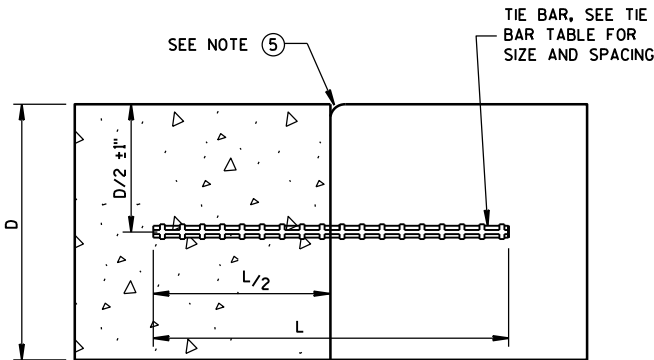
DOWELED-TRANSVERSE

CONTRACTION JOINTS

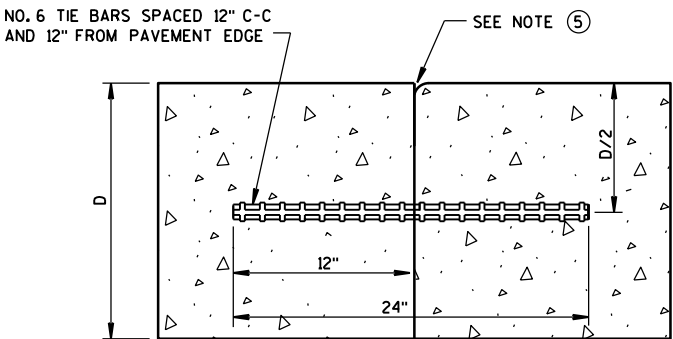
SEE NOTE ②



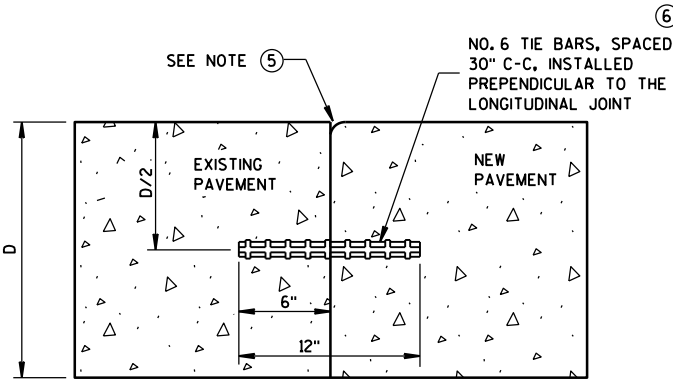
DOWELED TRANSVERSE ③



TIED LONGITUDINAL



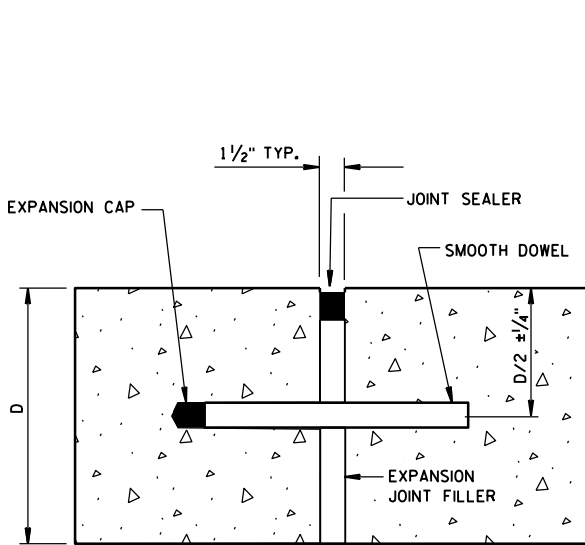
TIED TRANSVERSE ③
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



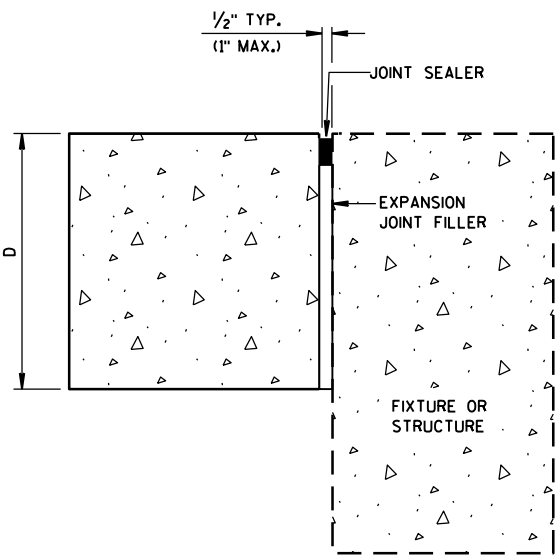
TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS

SEE NOTE ④



DOWELED-TRANSVERSE
SEE NOTE ①

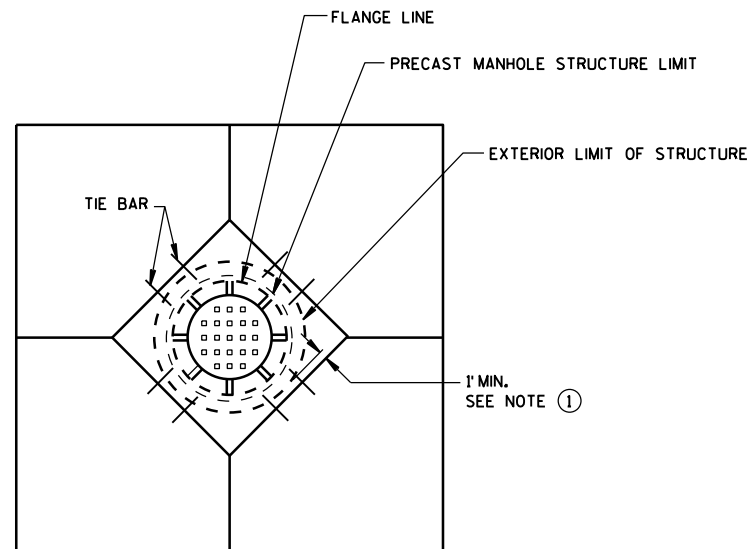


UNTIED-LONGITUDINAL

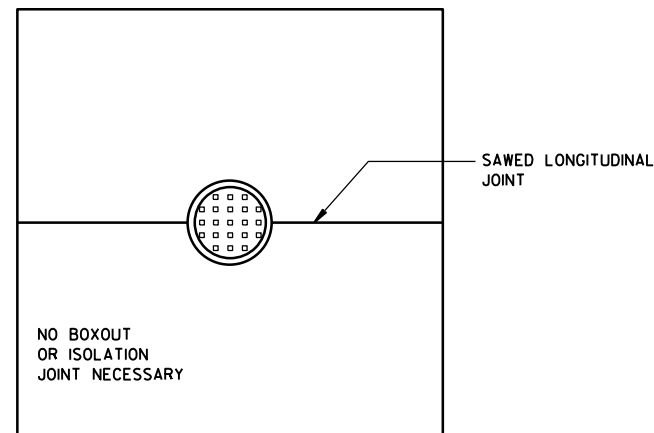
EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

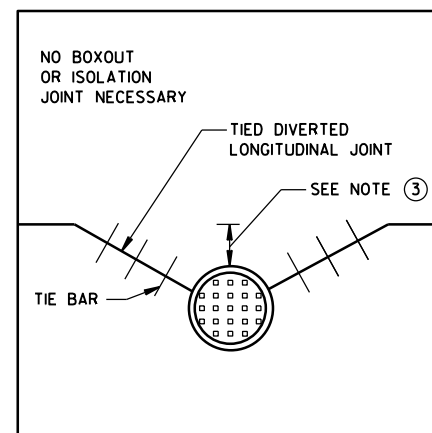
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 149



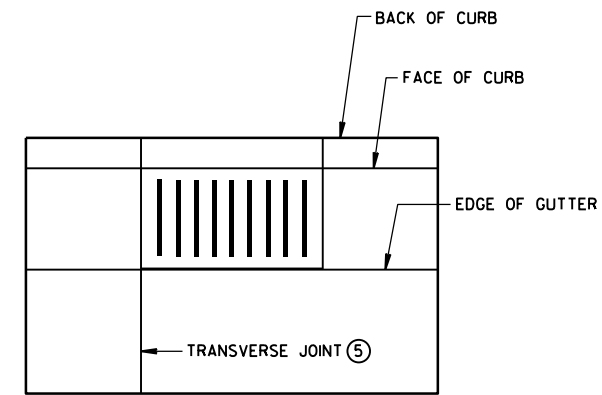
**DIAGONAL MANHOLE BOXOUT
FOR CONSTRUCTION JOINTS**



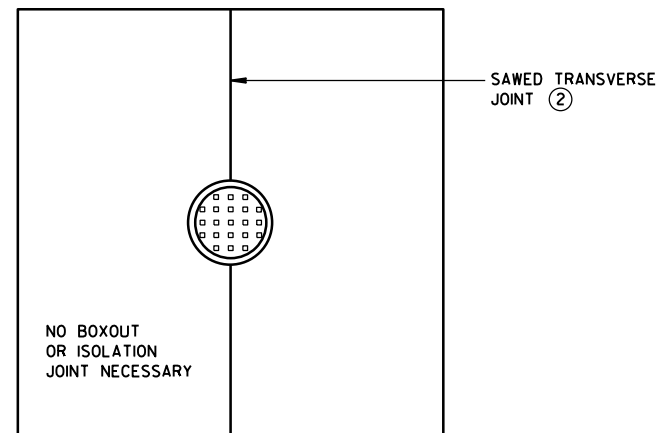
**MANHOLE WITH
LONGITUDINAL JOINT**



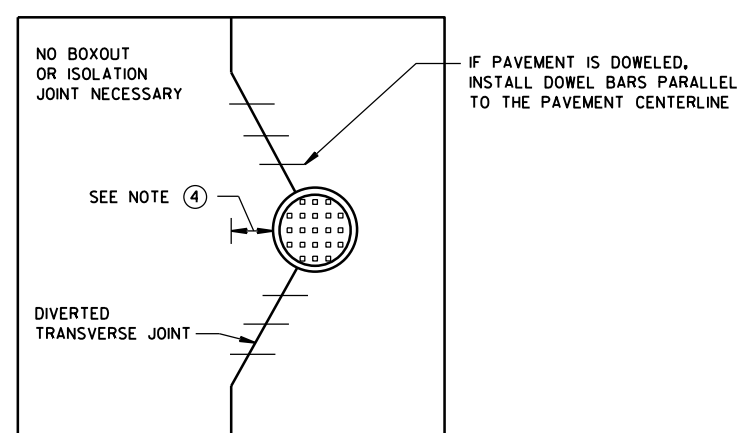
**MANHOLE WITH DIVERTED
LONGITUDINAL CONTRACTION JOINT**



**INLET WITH
TRANSVERSE JOINT**



**MANHOLE WITH
TRANSVERSE JOINT**



**MANHOLE WITH DIVERTED
TRANSVERSE CONTRACTION JOINT**

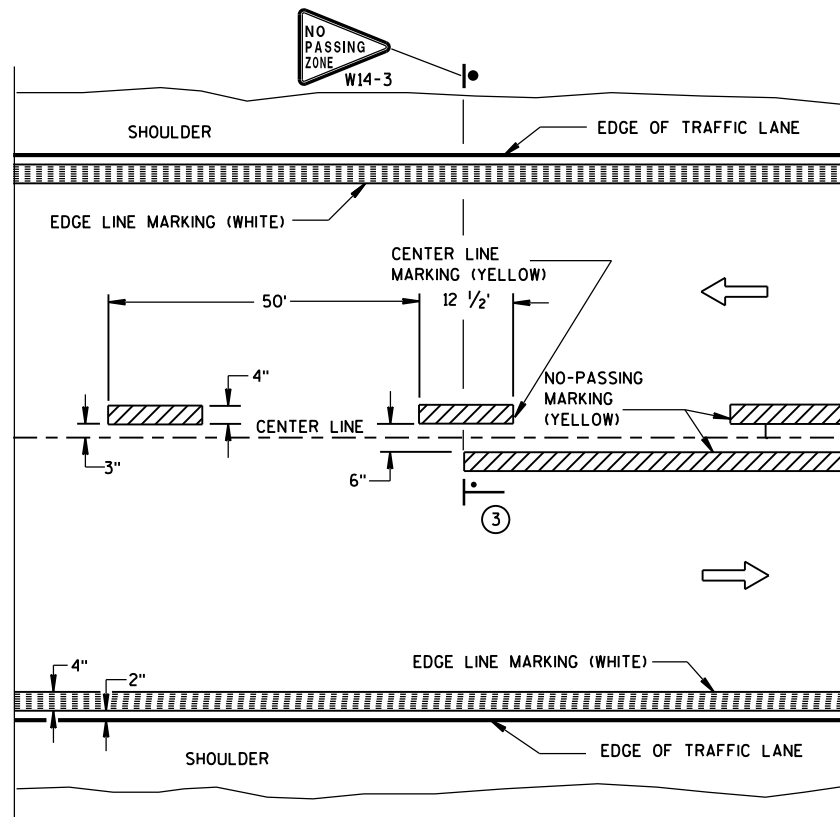
GENERAL NOTES

- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- ④ IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- ⑤ ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

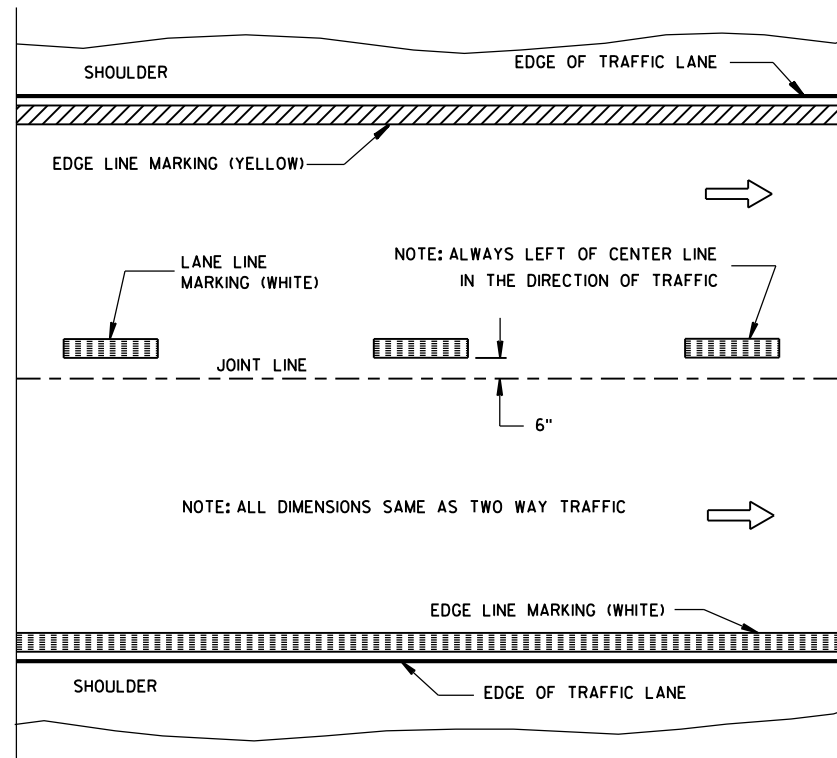
**CONCRETE PAVEMENT
JOINTING AT UTILITY FIXTURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPER 150
FHWA

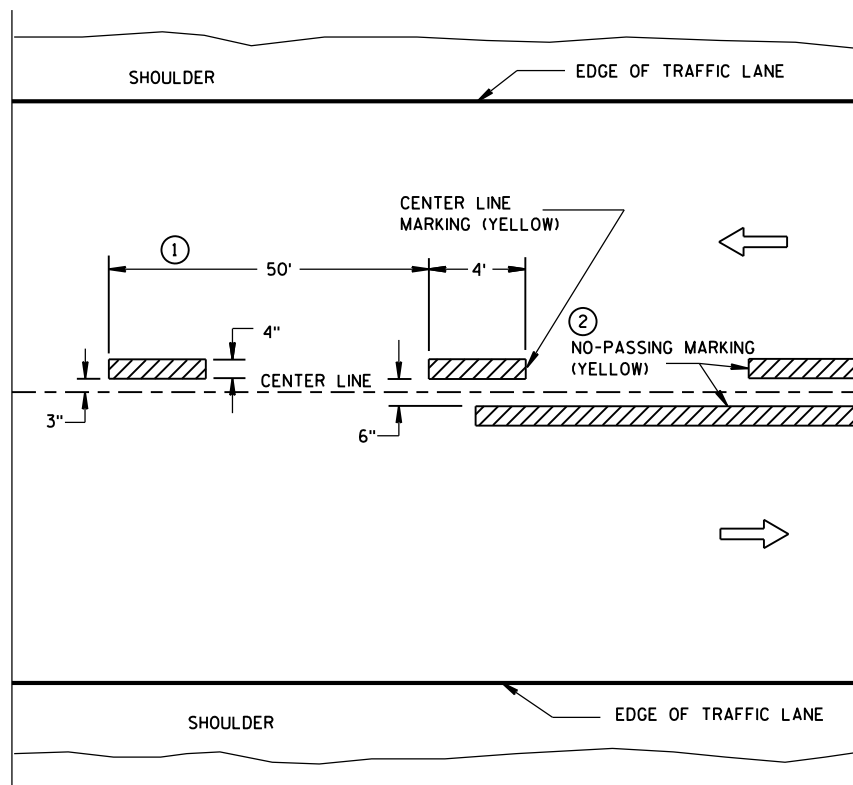


TWO WAY TRAFFIC

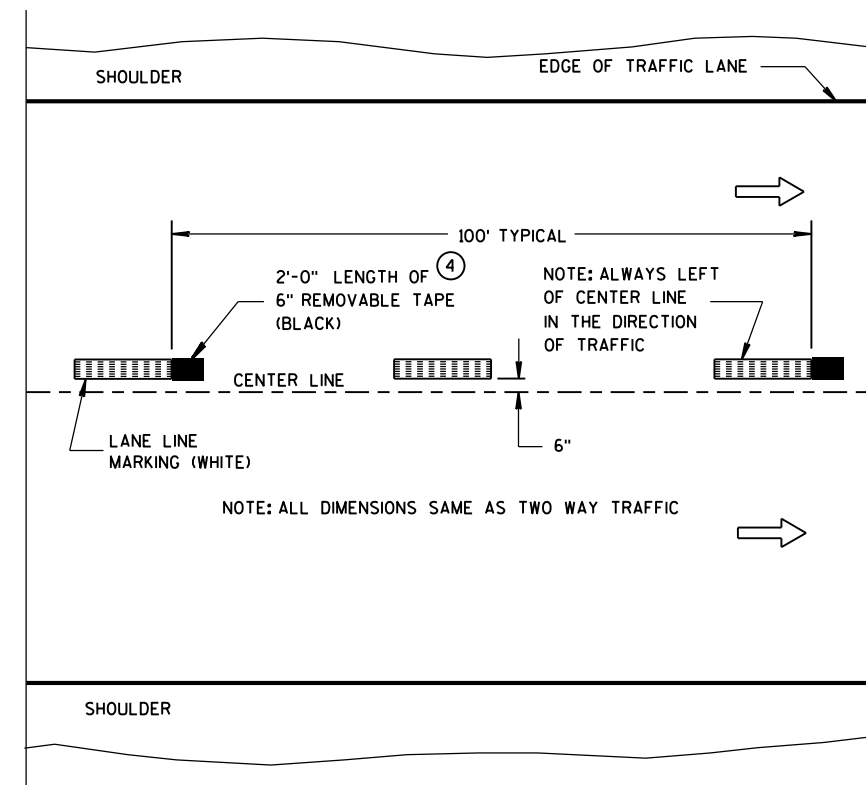


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

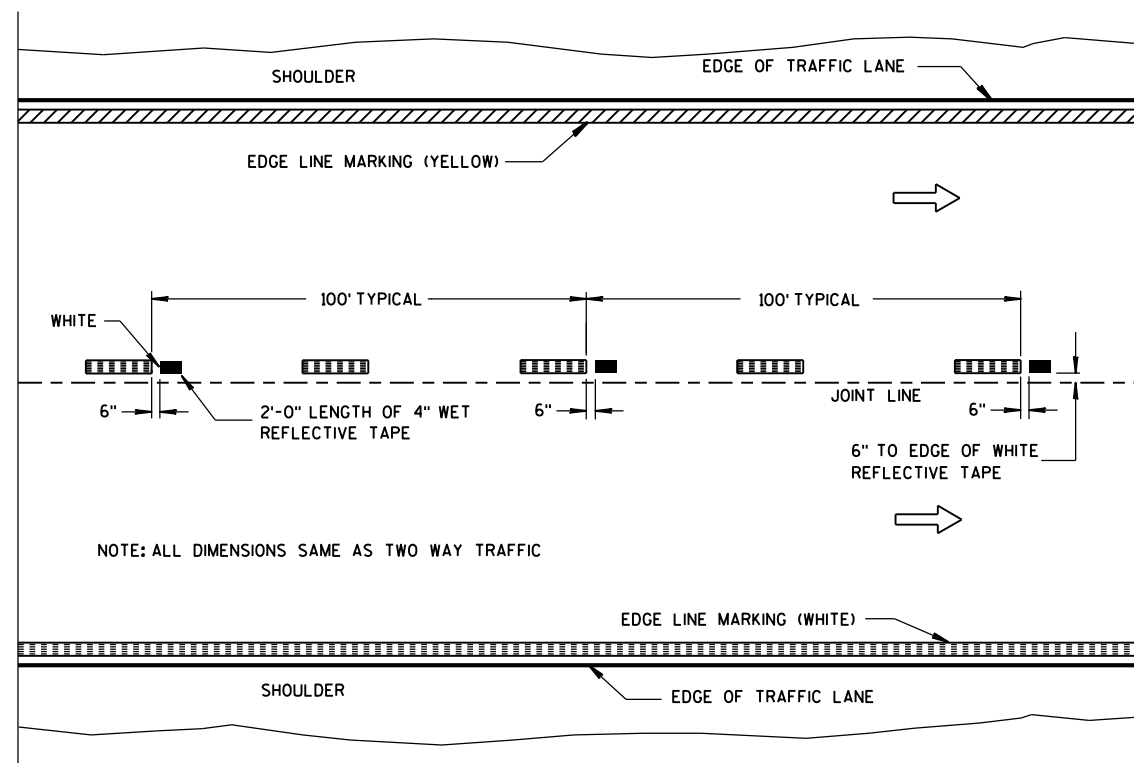
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- ③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- ④ CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

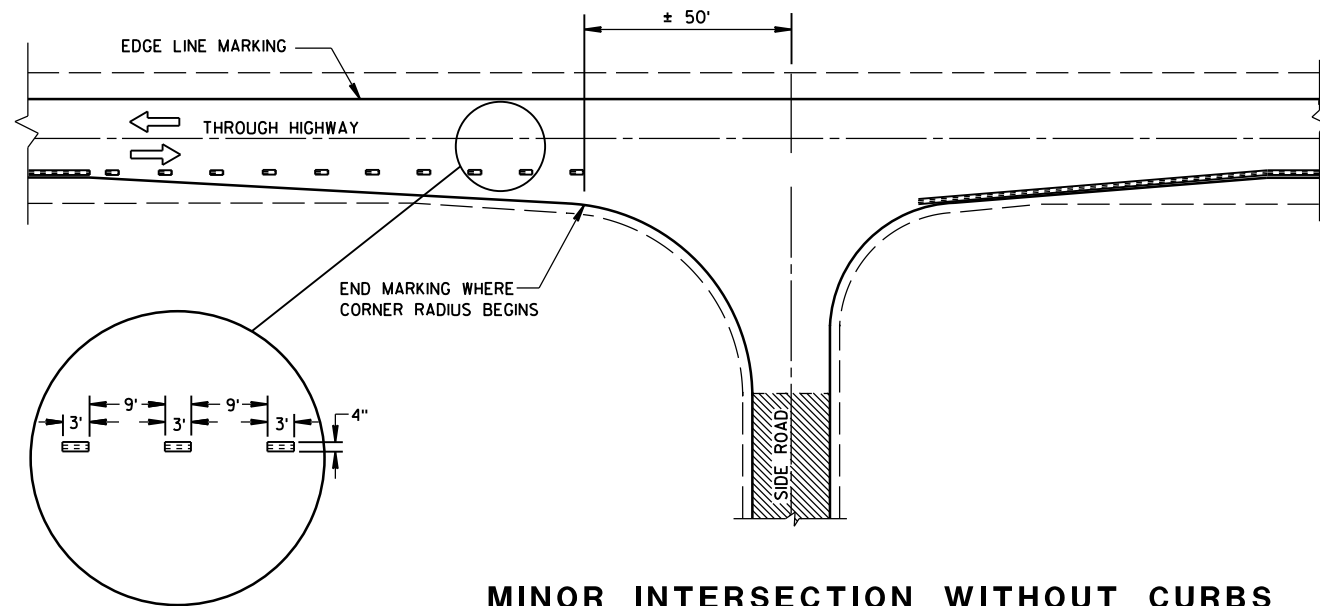
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013
DATE

FHWA

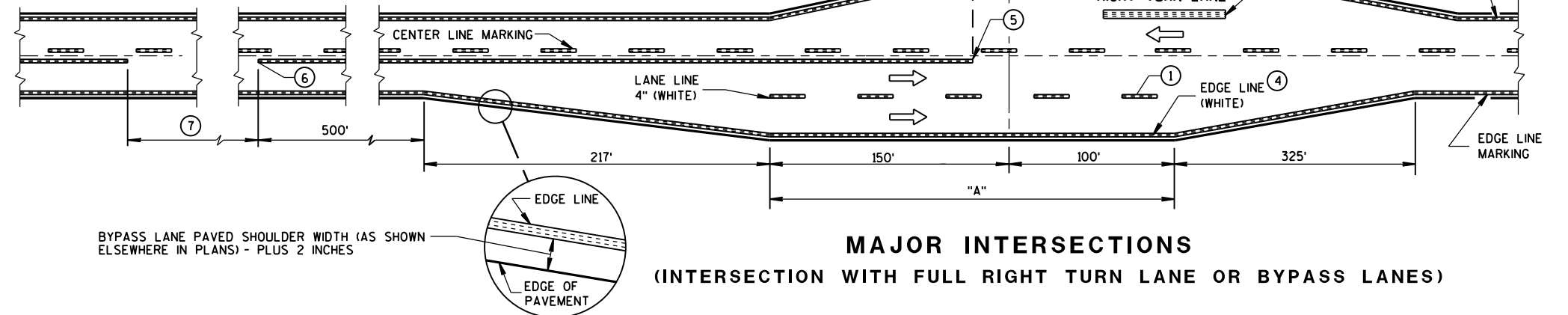
/S/ Travis Feltes
STATE TRAFFIC E 151



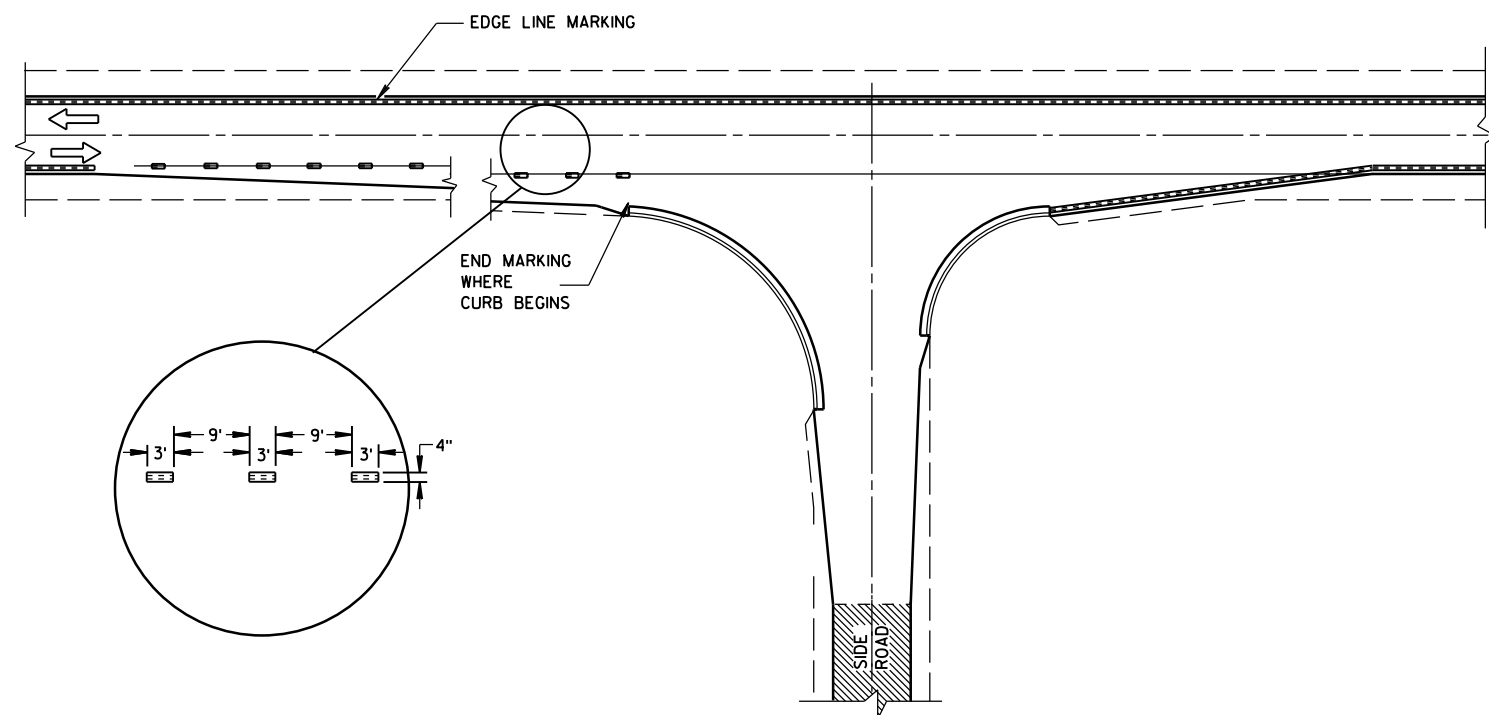
MINOR INTERSECTION WITHOUT CURBS

⑦

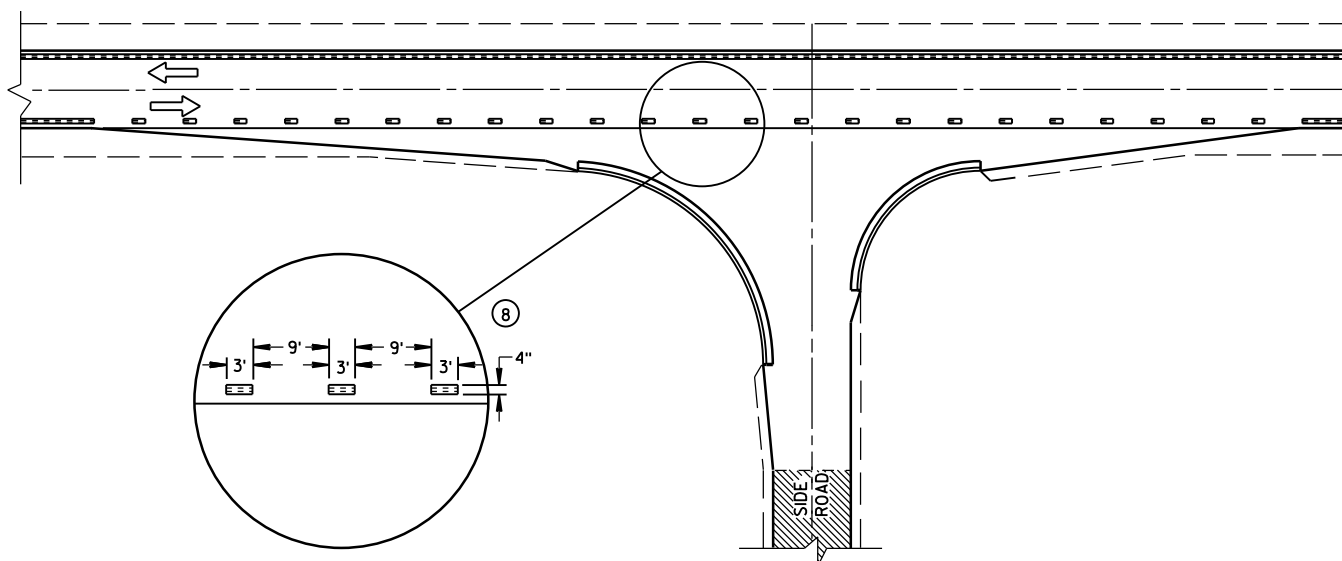
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



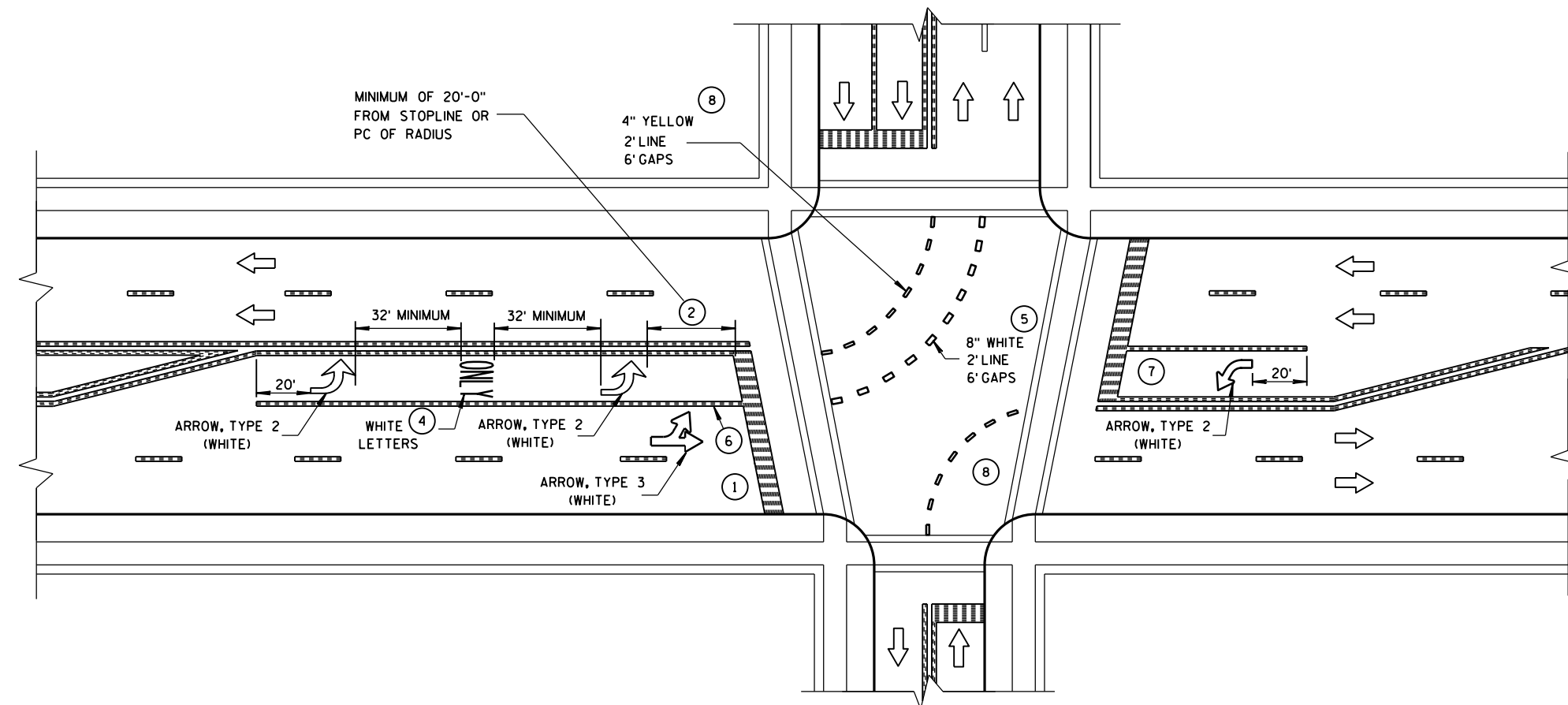
MINOR INTERSECTION WITH CURBS
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)

GENERAL NOTES

- EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
 - ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
 - ③ ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
 - ④ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
 - ⑤ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
 - ⑥ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
 - ⑦ IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
 - ⑧ 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

PAVEMENT MARKING
(INTERSECTIONS)

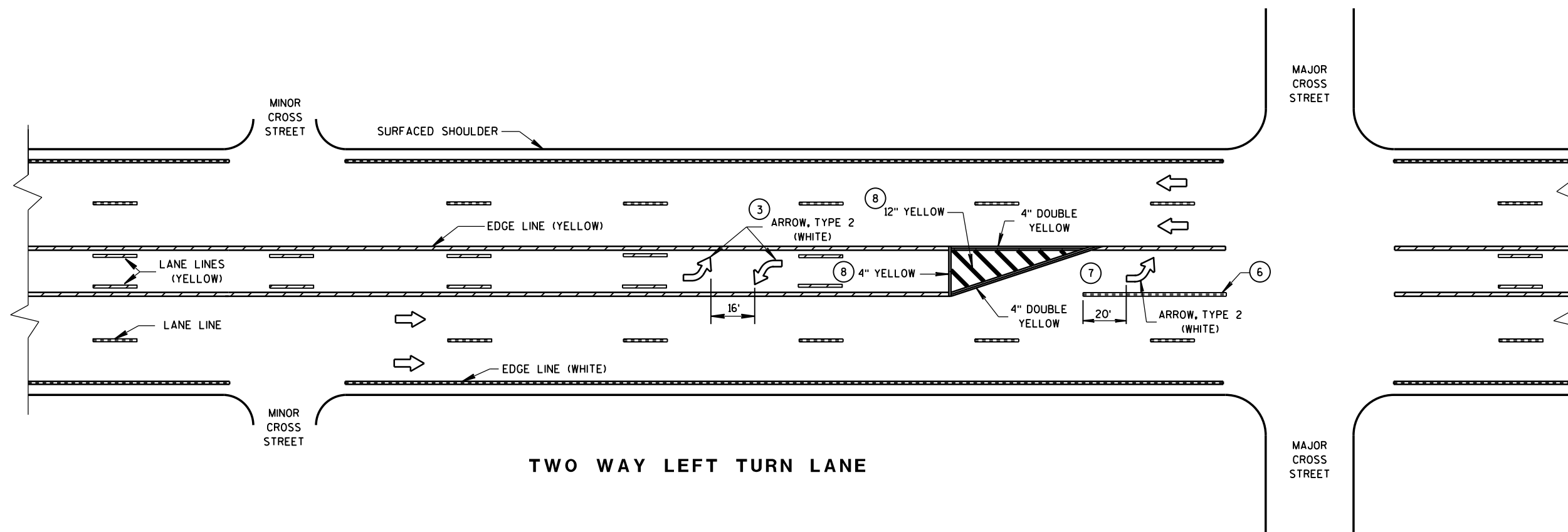
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 152



GENERAL NOTES

- ① STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- ② DISTANCE MAY BE ADJUSTED TO ACCOMMODATE SHORT LEFT TURN LANES, AS APPROVED BY THE ENGINEER.
- ③ A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ④ ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
- ⑤ 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
- ⑥ 8" WHITE
- ⑦ ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
- ⑧ REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

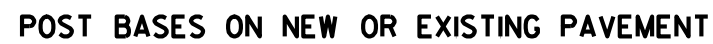
NOTE:
ARROW SYMBOL (➡)
SHOWS DIRECTION OF TRAVEL



PAVEMENT MARKING
(LEFT TURN LANE)

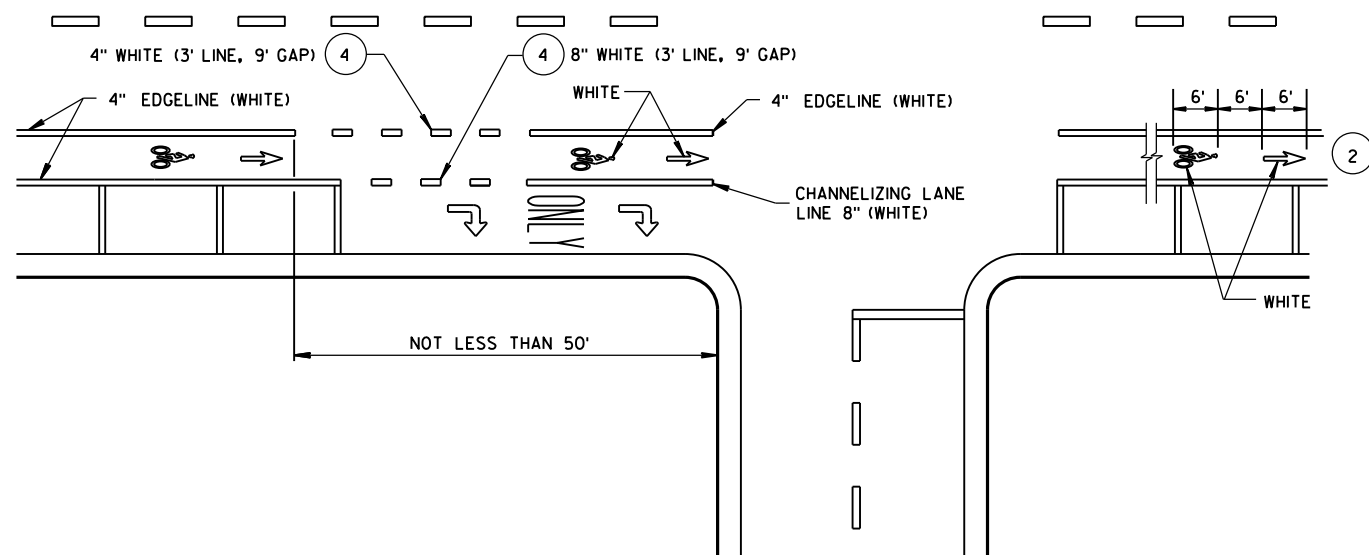
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

153

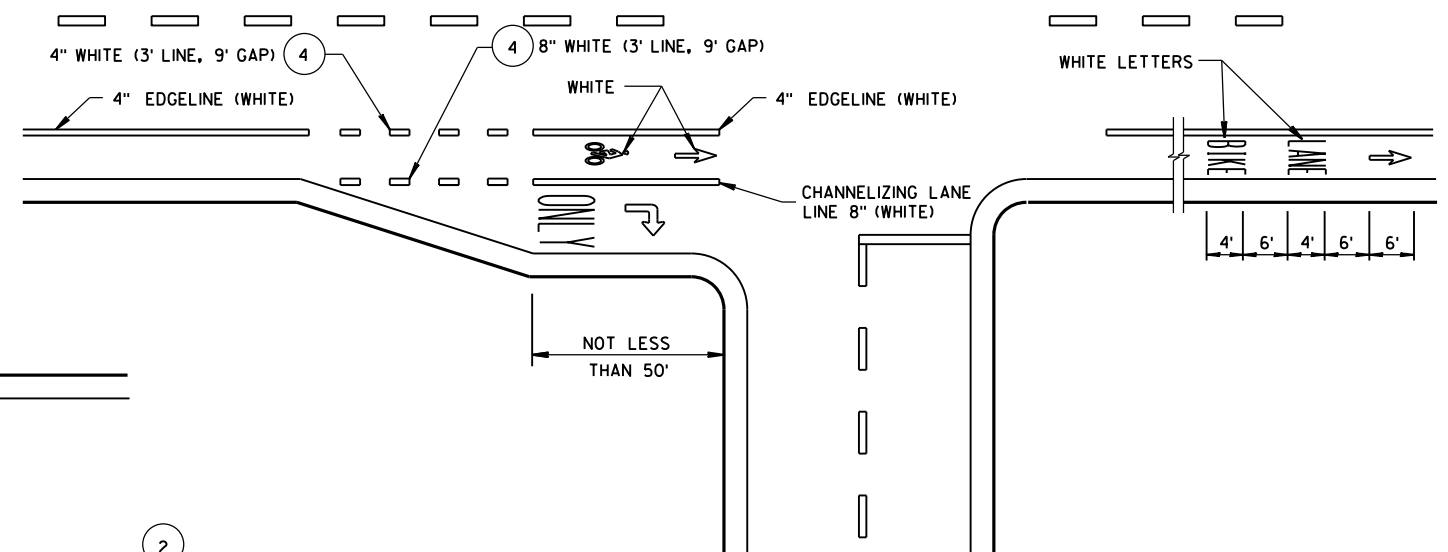


SECTION B-B

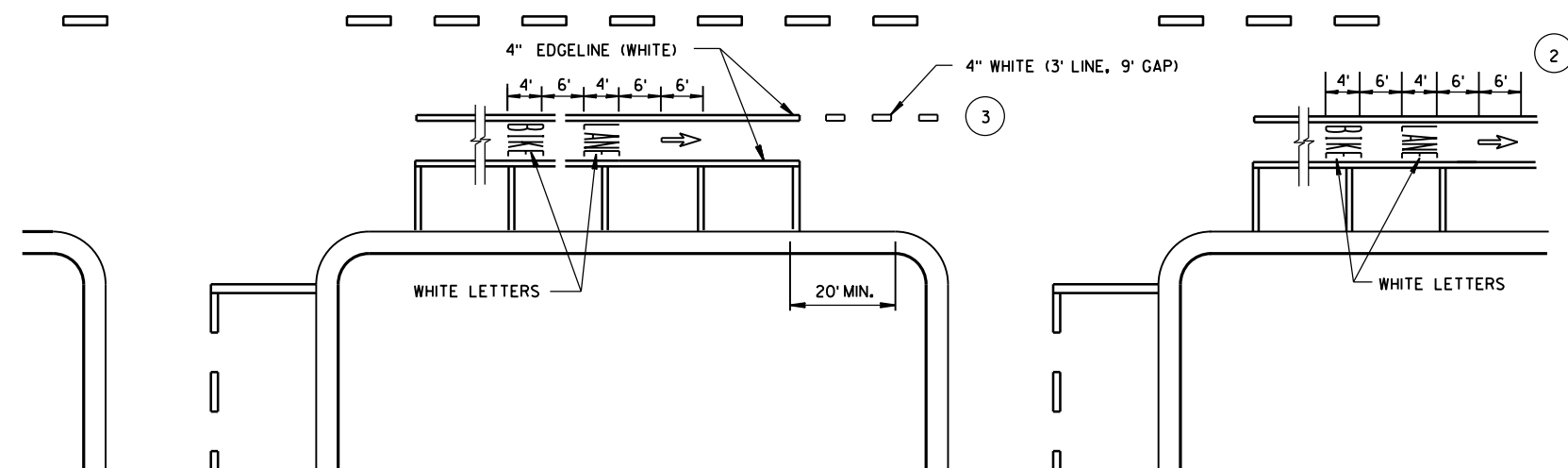
ALTERNATIVE SHAPES



DESIGNATED BICYCLE LANE



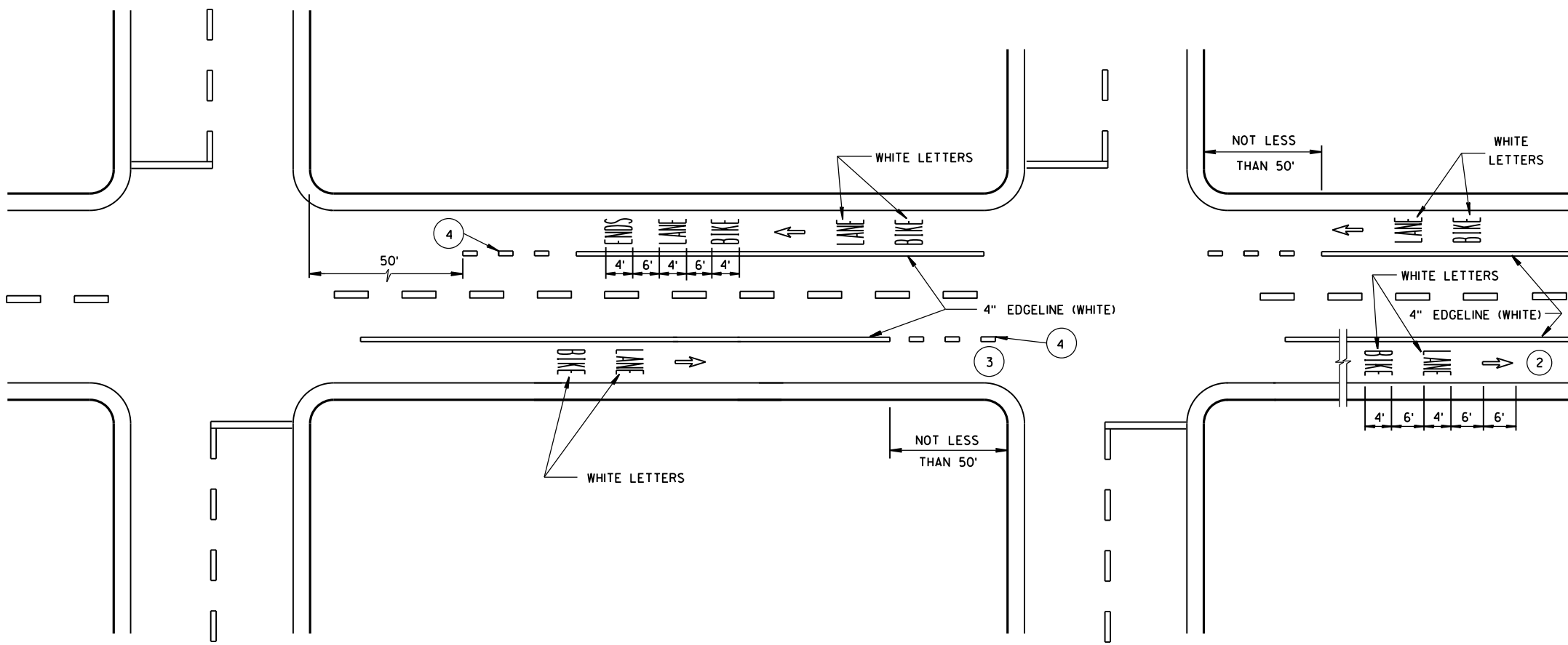
DESIGNATED BICYCLE LANE
NO PARKING, RIGHT TURN LANE



**DESIGNATED BICYCLE LANE
WITH PARKING, NO RIGHT TURN LANE**

- ## GENERAL NOTES
- 1 DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
 - 2 THE SERIES OF PAVEMENT MARKING SYMBOLS SHALL BE REPEATED AFTER INTERSECTIONS AND SPACED A MAXIMUM OF 250'. NO PAVEMENT MARKING WILL TAKE PLACE IN THE CROSSWALK.
 - 3 DOTTED LINES SHOULD BE USED 50' TO 200' IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
 - 4 WHEN SPECIFIED IN THE CONTRACT.

URBAN BICYCLE LANE MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED <u>4/30/2013</u> DATE	<u>/S/ Travis Feltes</u> STATE TRAFFIC ENGINEER 155



DESIGNATED BICYCLE LANE
NO PARKING

GENERAL NOTES

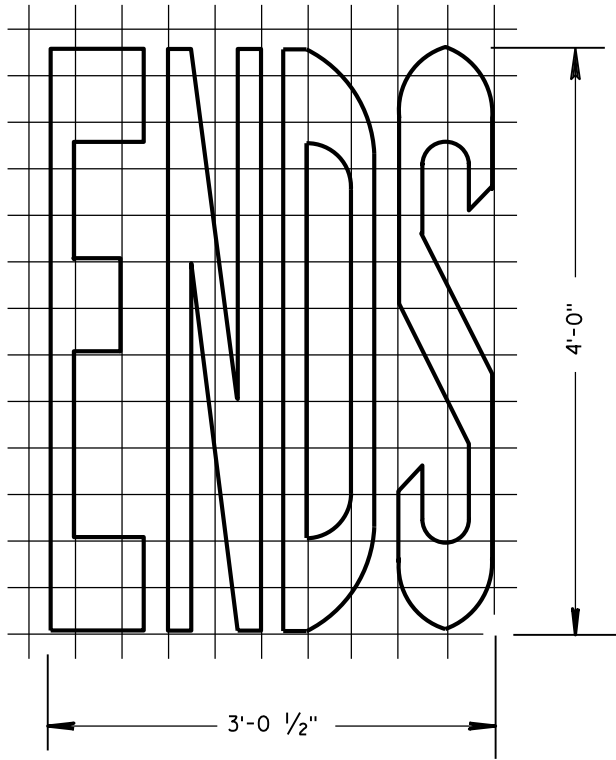
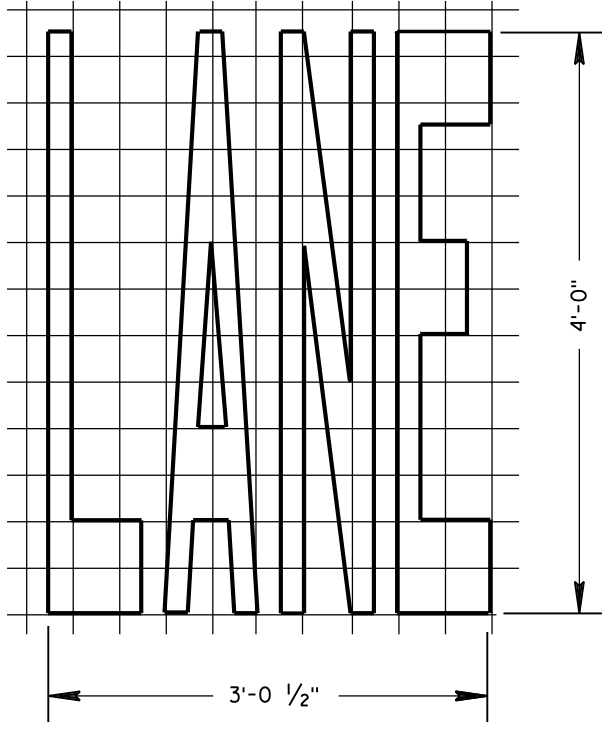
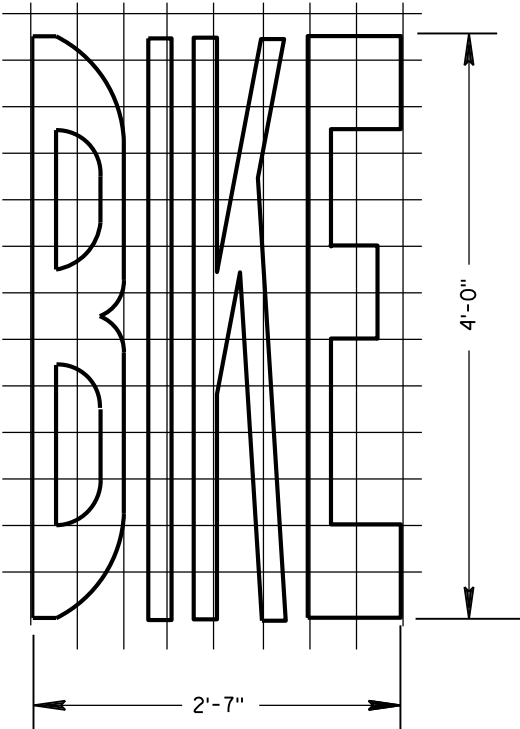
- 1 DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
- 2 THE SERIES OF PAVEMENT MARKING SYMBOLS SHALL BE REPEATED AFTER INTERSECTIONS AND SPACED A MAXIMUM OF 250'. NO PAVEMENT MARKING WILL TAKE PLACE IN THE CROSSWALK.
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- 4 3' LINE, 9' GAP - 4" WIDE, WHITE.

URBAN BICYCLE LANE MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4/30/2013 DATE	/S/ Travis Fettes STATE TRAFFIC ENGINEER 156
FHWA	

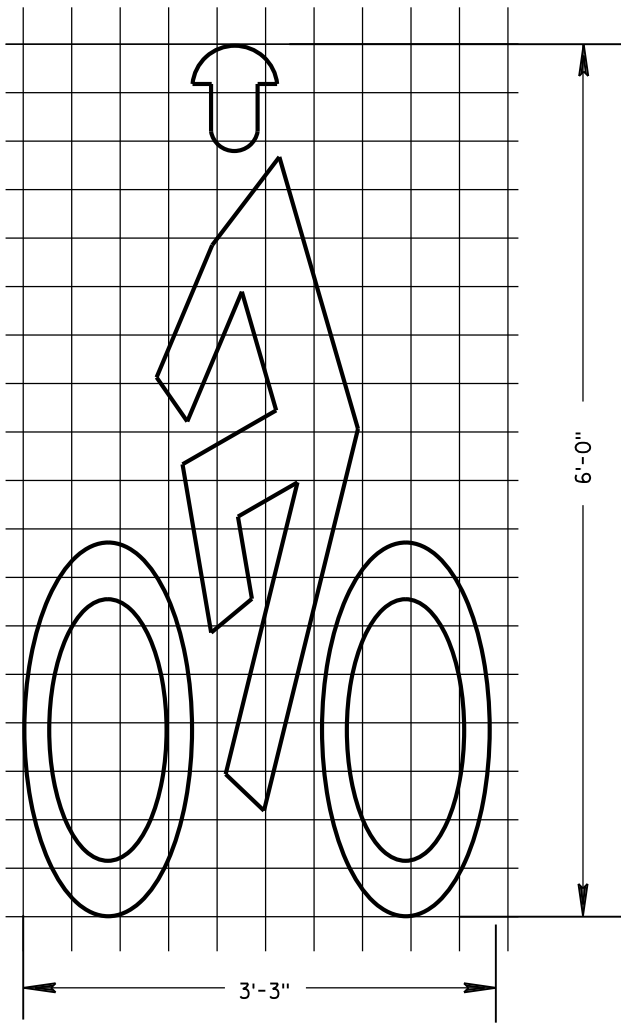
GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

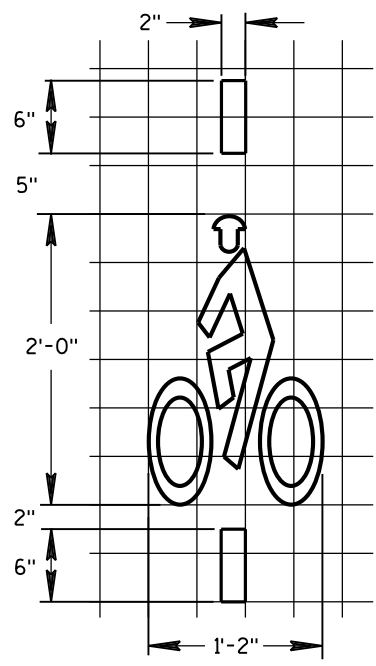
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



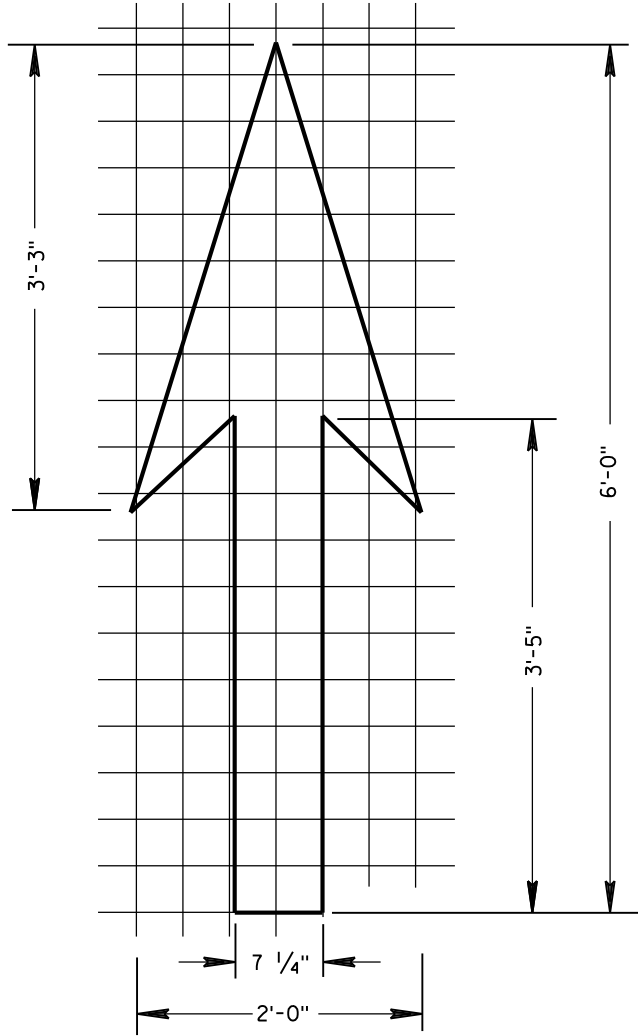
BIKE LANE WORDS



BIKE LANE SYMBOL

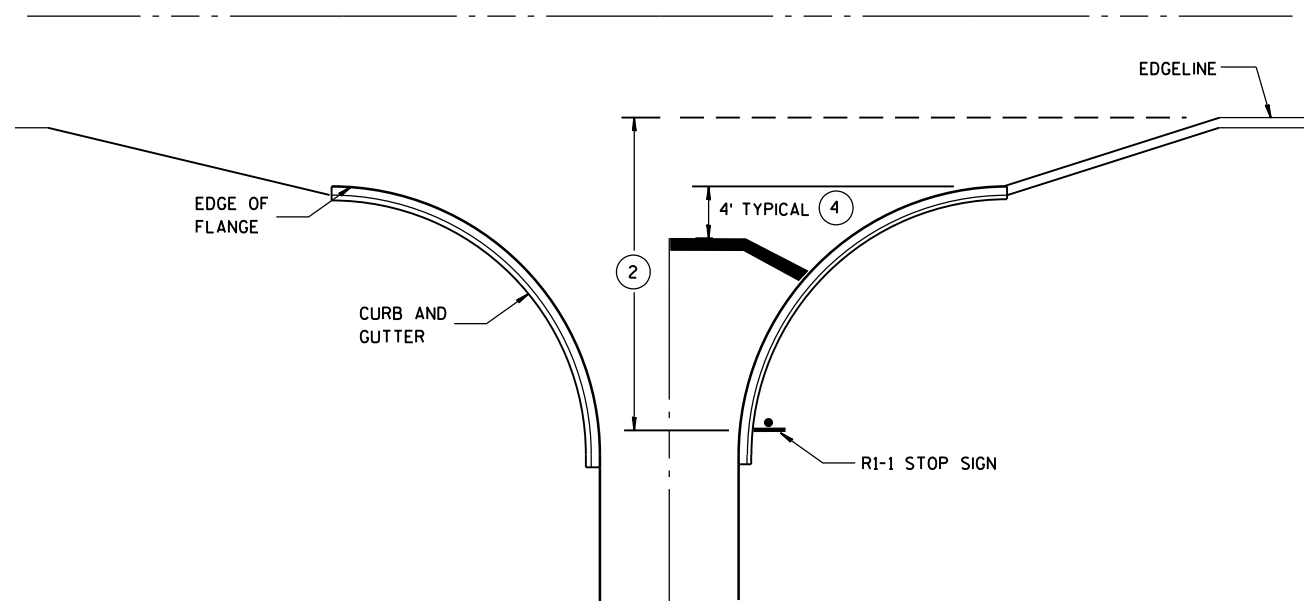


BICYCLE DETECTOR PAVEMENT MARKING

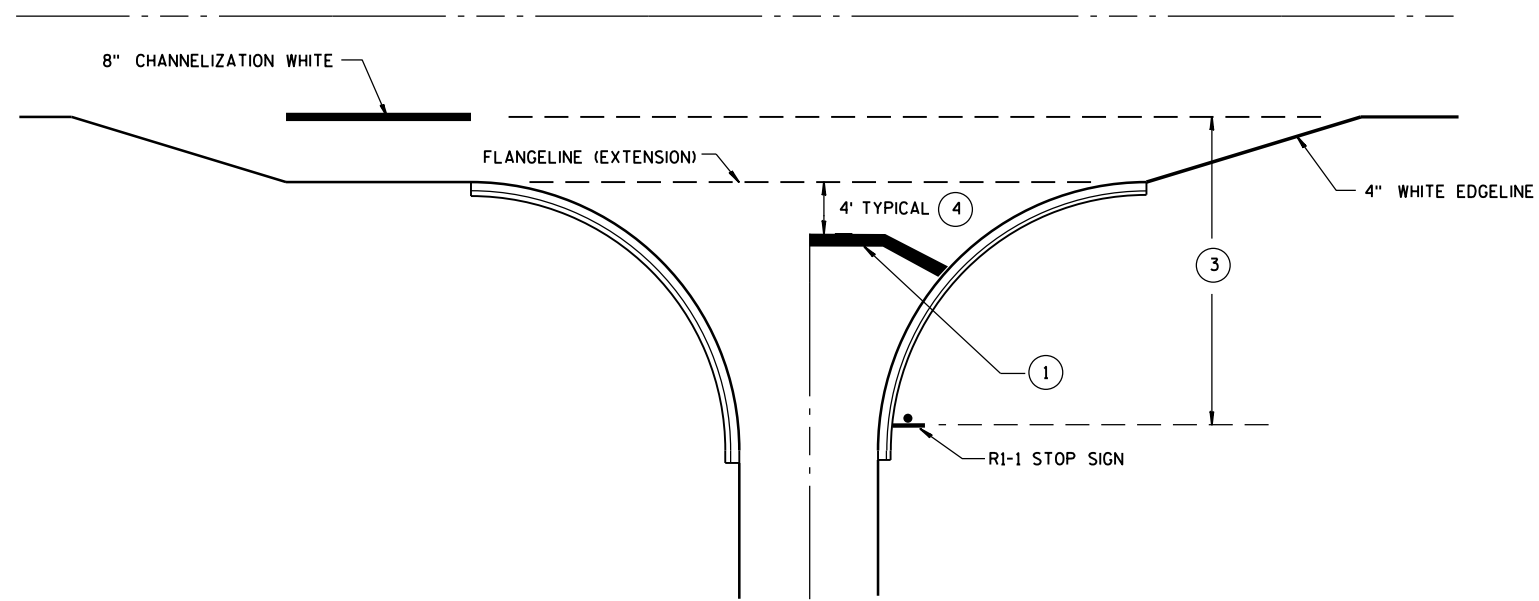


BIKE LANE ARROW

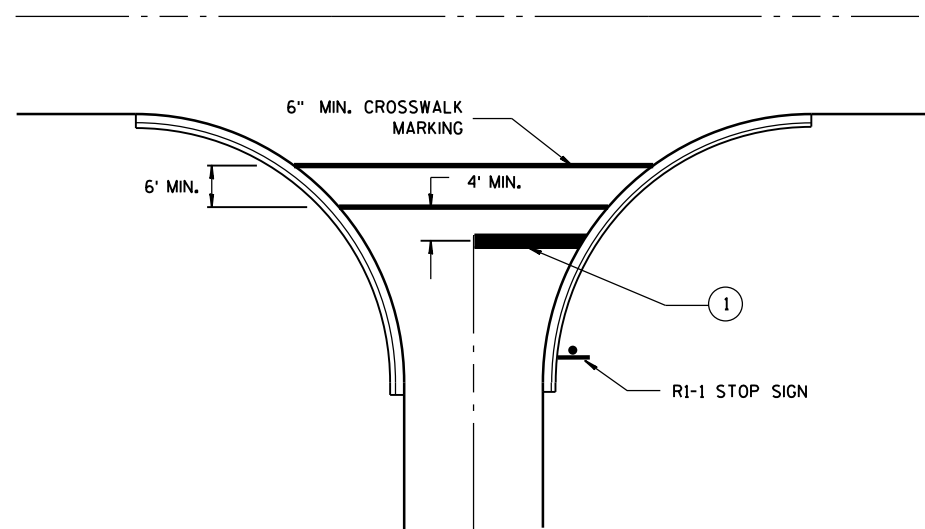
PAVEMENT MARKING FOR BIKE LANES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-30-2013 DATE	/S/ Travis Feltes STATE TRAFFIC EN 157
FHWA	



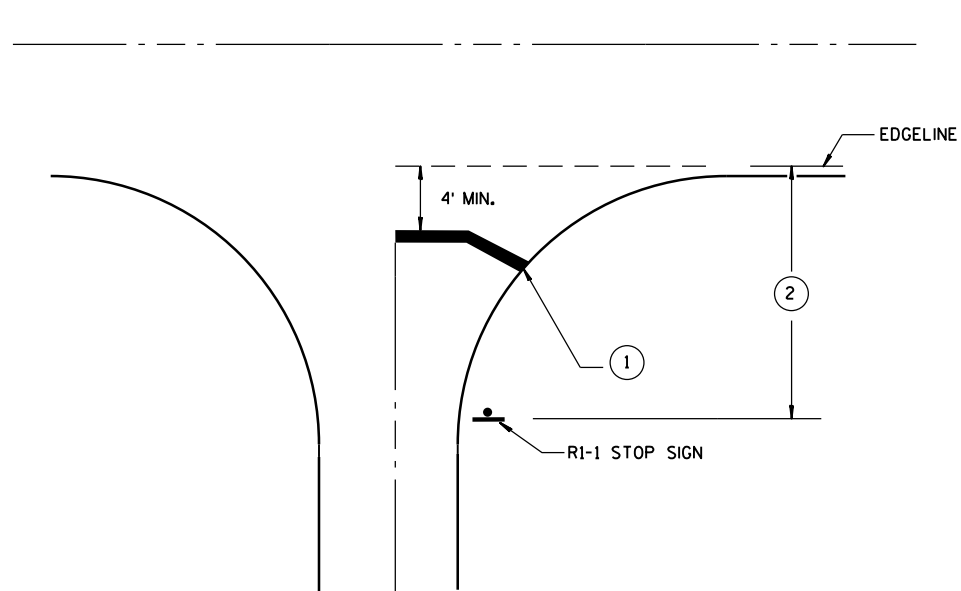
**TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER**



**TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE**



**TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING**



**TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER**

GENERAL NOTES

- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- ③ IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- ④ MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

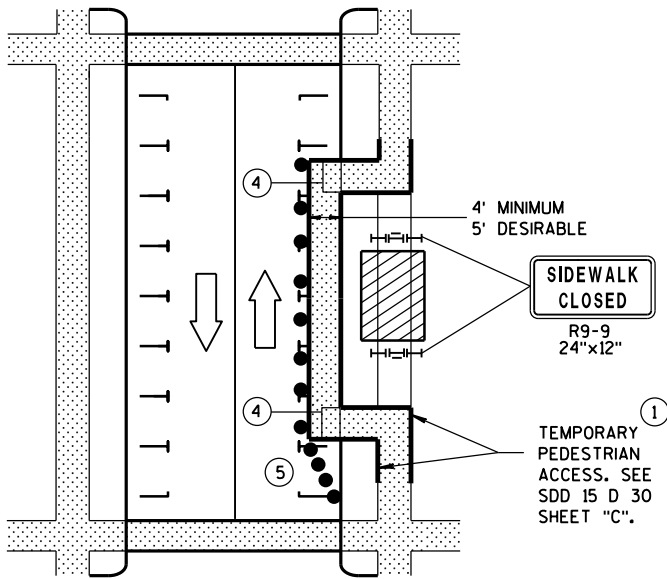
APPROVED

4/30/2013
DATE

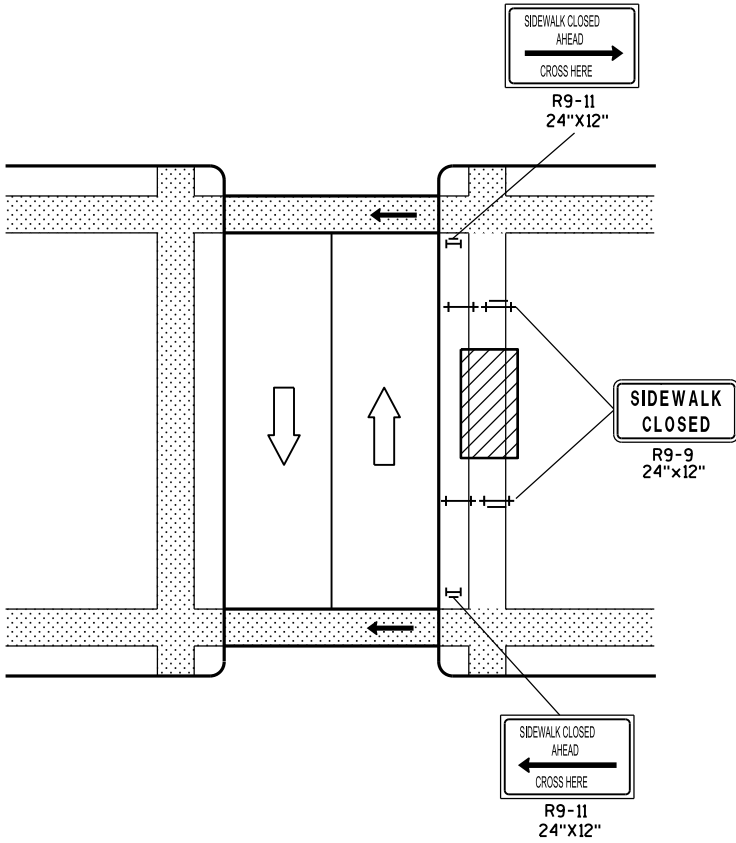
FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER 158

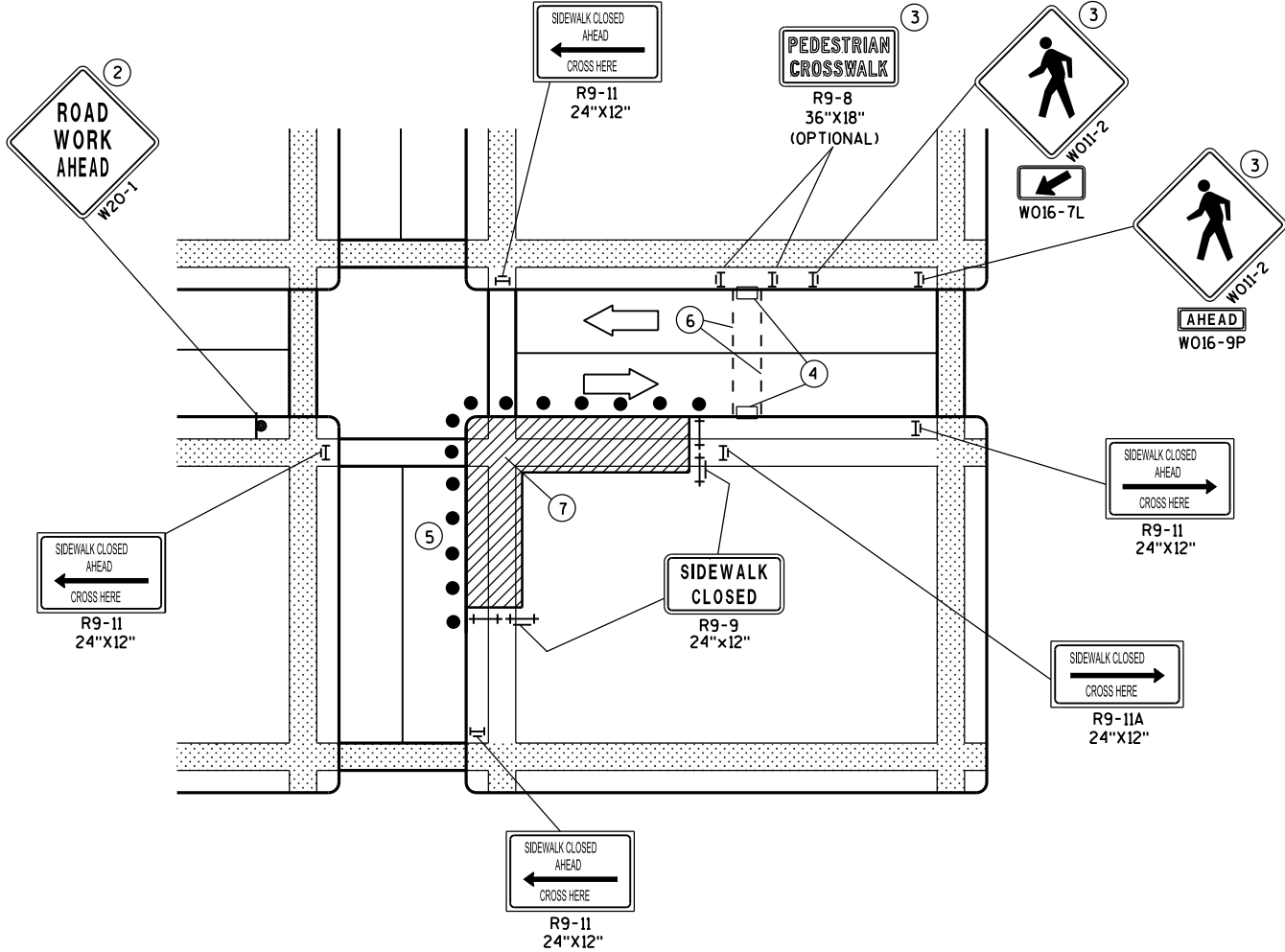
NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.



MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE

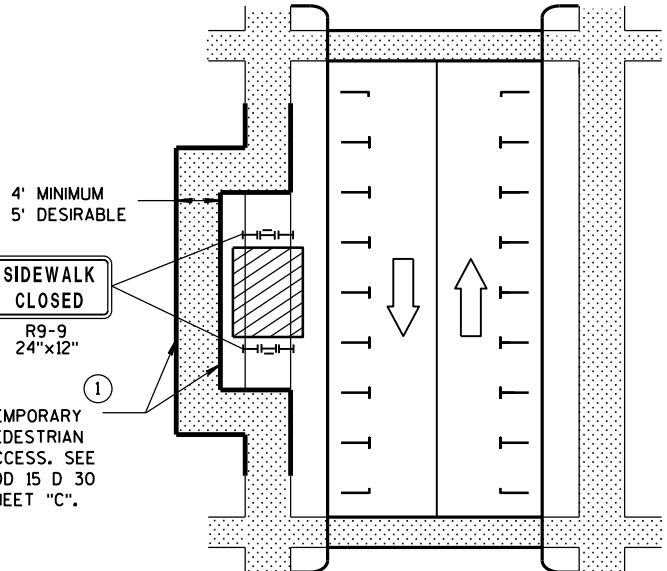


MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECTABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

FOR NIGHTTIME CLOSURE USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

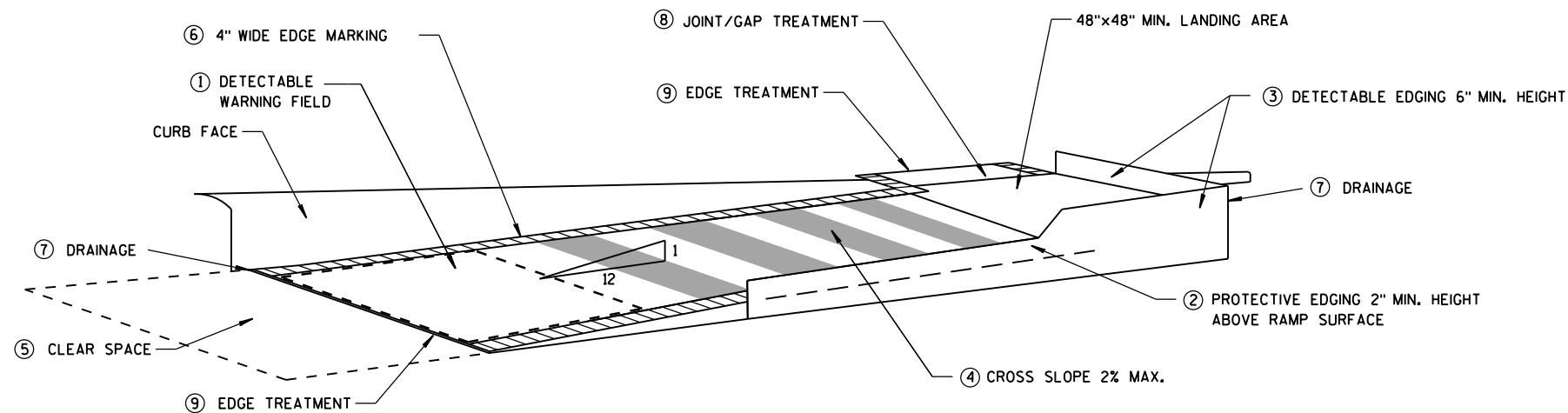
- 1 IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE.
- 2 "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.
- 3 IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND W011-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.
- 4 TEMPORARY CURB RAMPS. SEE SDD 15 D 30 SHEET "B".
- 5 DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.
- 6 TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
- 7 LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

LEGEND

- SIGN ON PERMANENT SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL DRUM

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

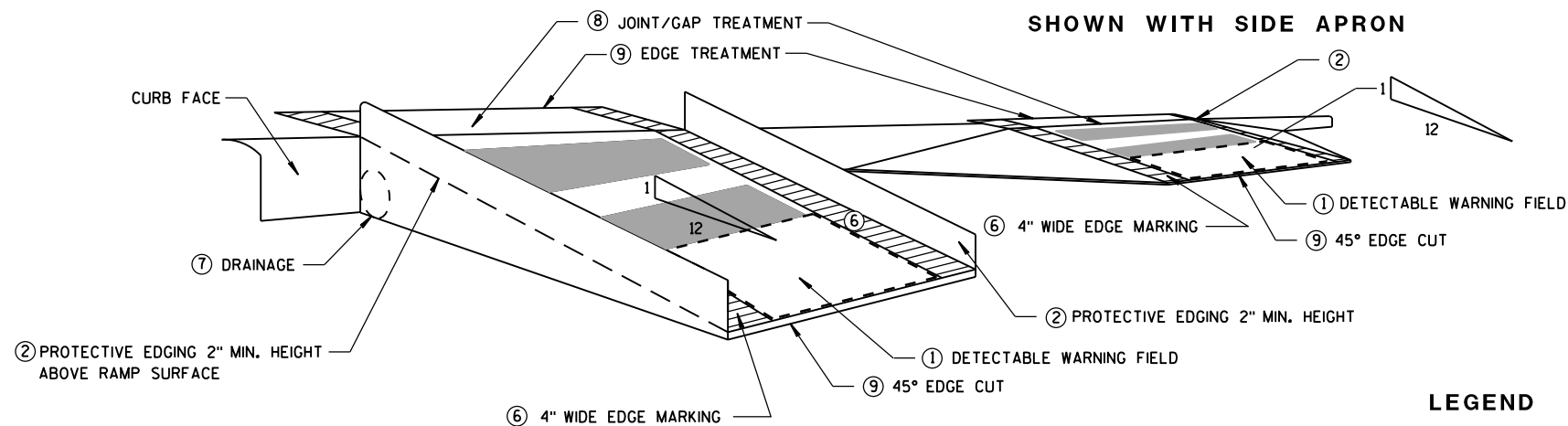
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION 159



TEMPORARY CURB RAMP
PARALLEL TO CURB

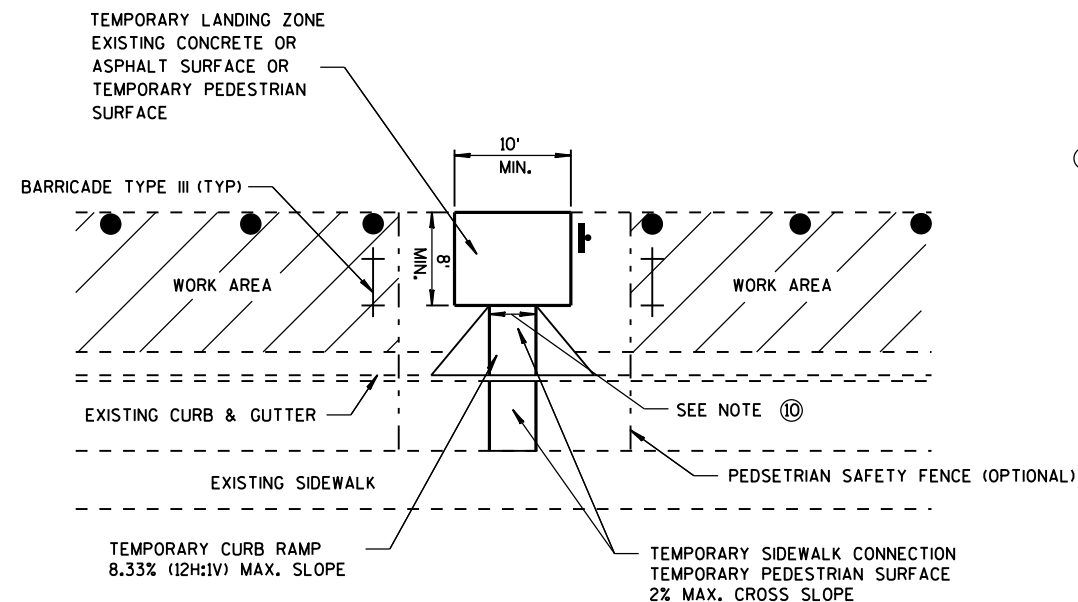
GENERAL NOTES

- NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.
ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.
- 1 CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 8D5 SHEET "E".
 - 2 PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
 - 3 DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
 - 4 CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.
 - 5 CLEAR SPACE OF 48"x48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
 - 6 THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.
 - 7 DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
 - 8 LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
 - 9 CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHALL BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".
 - 10 5' WIDE MIN. WITH PEDESTRIAN SAFETY FENCE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY FENCE.



SHOWN WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP
PERPENDICULAR TO CURB



TEMPORARY BUS STOP PAD

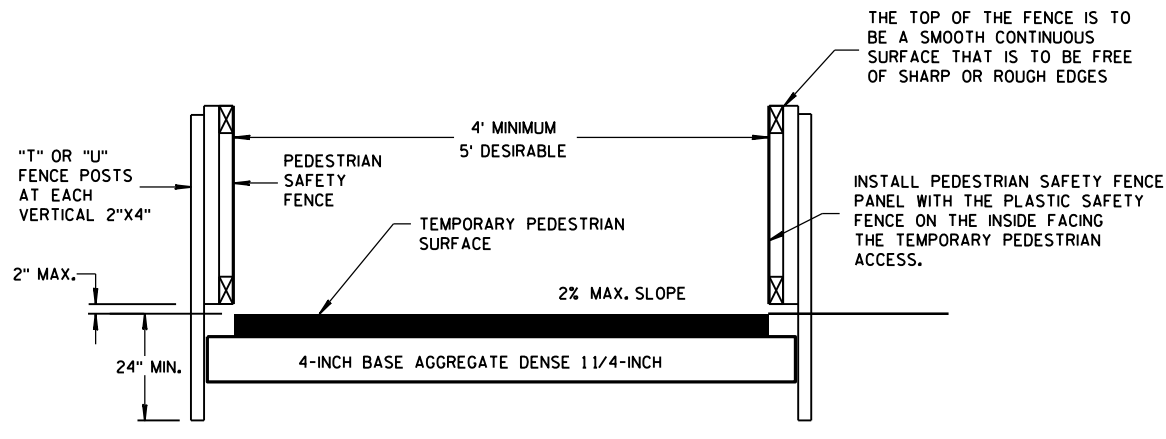
LEGEND

- WORK AREA
- TYPE III BARRICADE
- TRAFFIC CONTROL DRUM

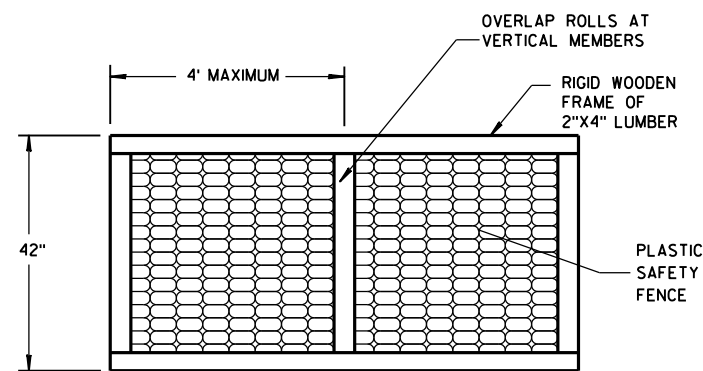
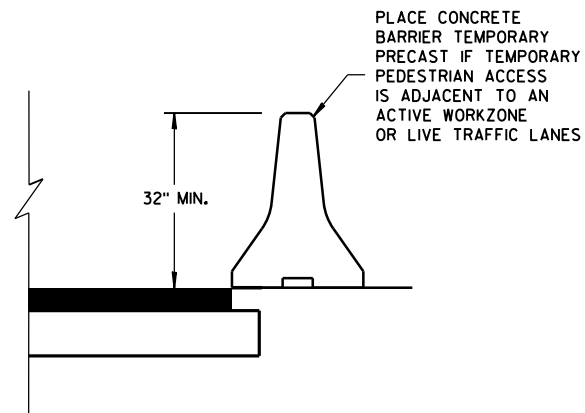
TRAFFIC CONTROL,
TEMPORARY ADA COMPLIANT
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

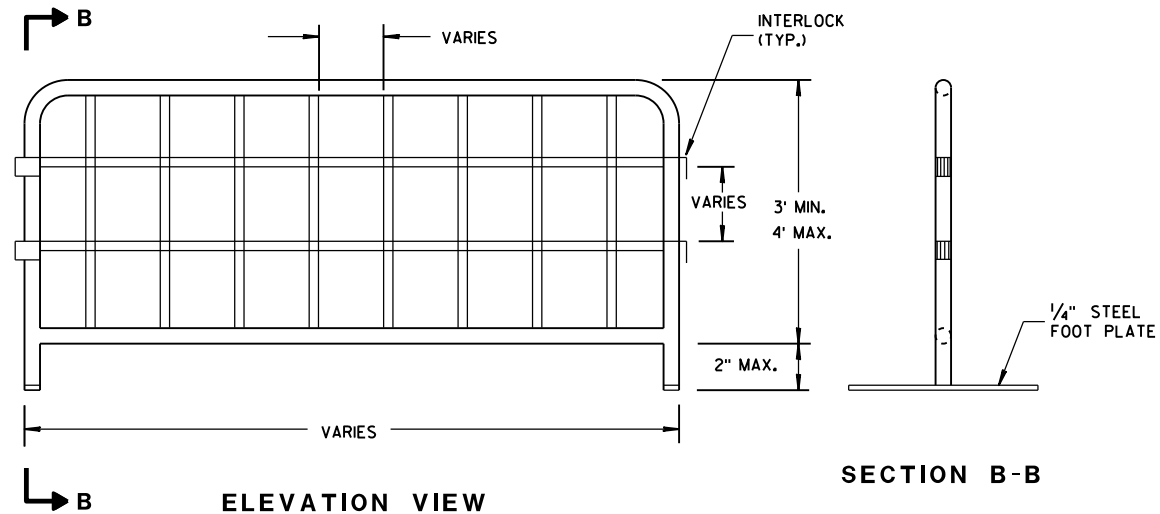
APPROVED
March 2015 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER SIGN
FHWA



TEMPORARY PEDESTRIAN ACCESS

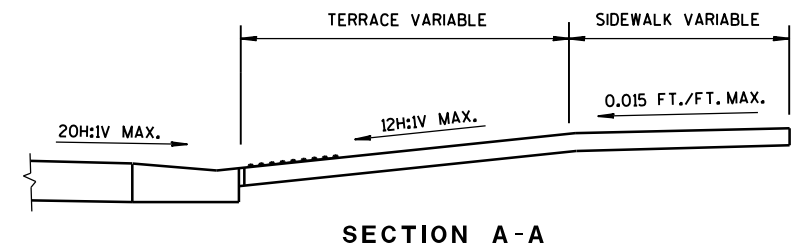


PEDESTRIAN SAFETY FENCE

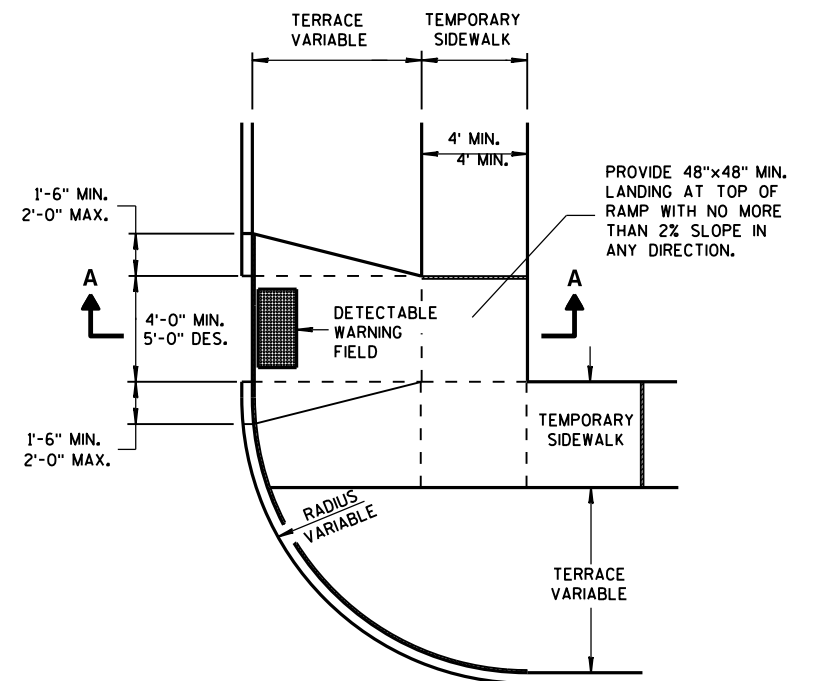


TEMPORARY PEDESTRIAN STEEL BARRICADE

GENERAL NOTES
① INTERCHANGEABLE WITH THE PEDESTRIAN SAFETY FENCE.

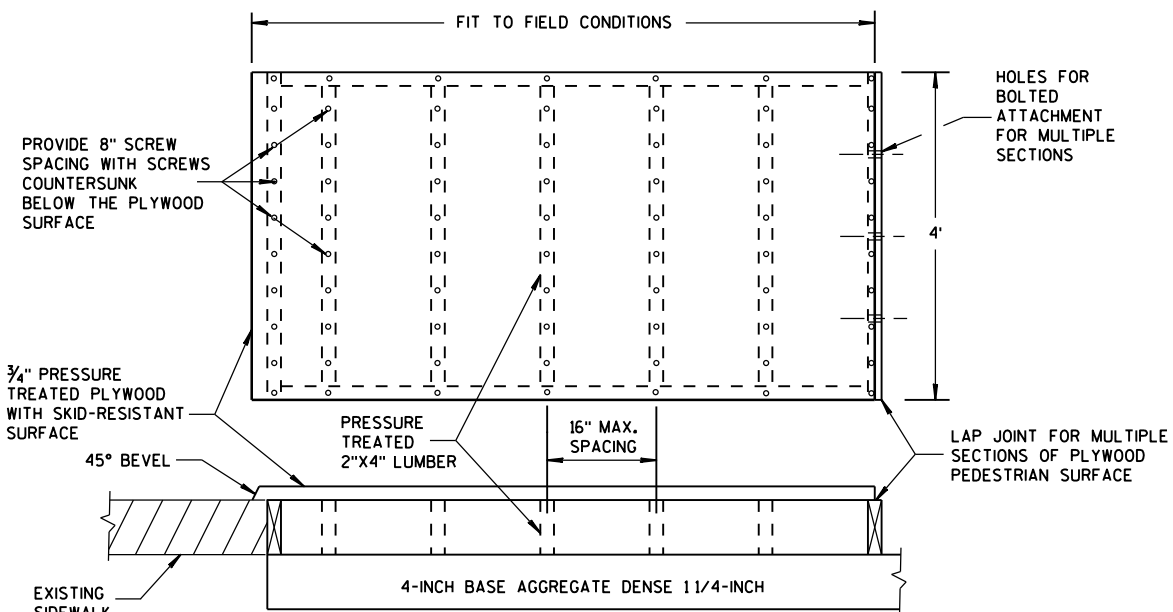


SECTION A-A

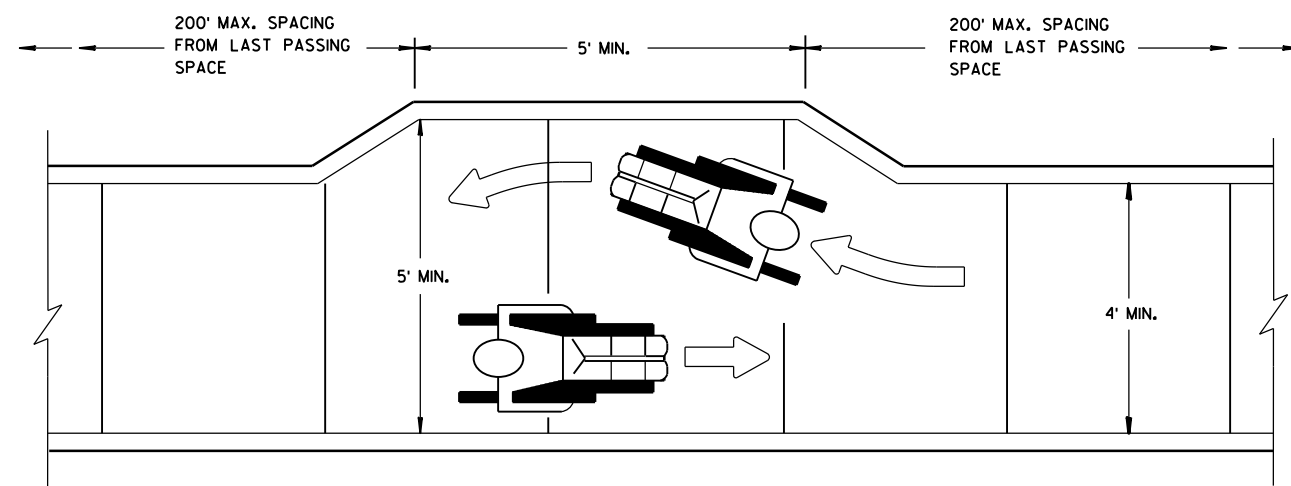


PLAN VIEW

TEMPORARY TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

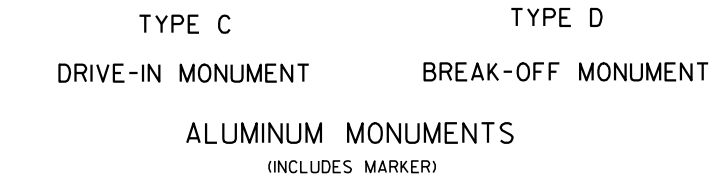
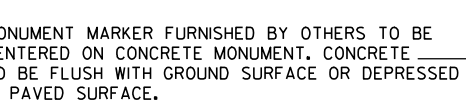


TEMPORARY PEDESTRIAN SURFACE PLYWOOD

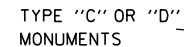


NARROW SIDEWALK PASSING DETAIL

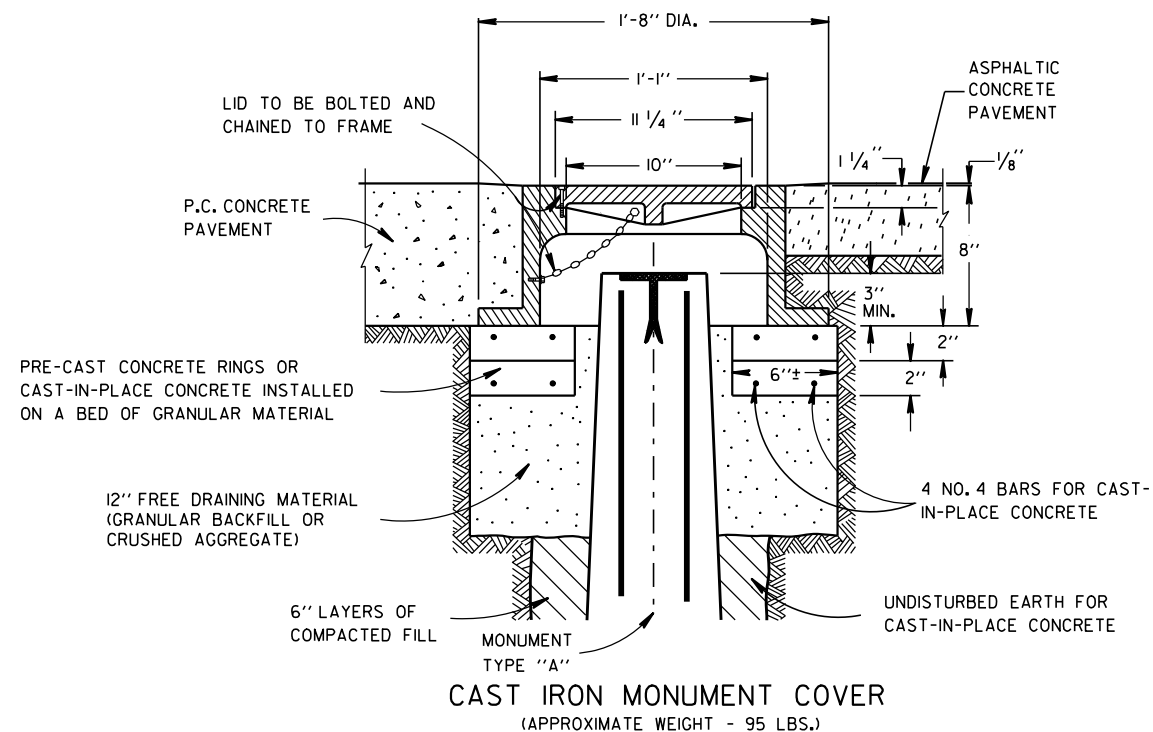
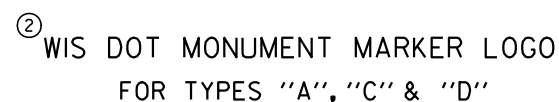
TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2015 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER 161 SIGN
FHWA	



- ① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.
- ② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)

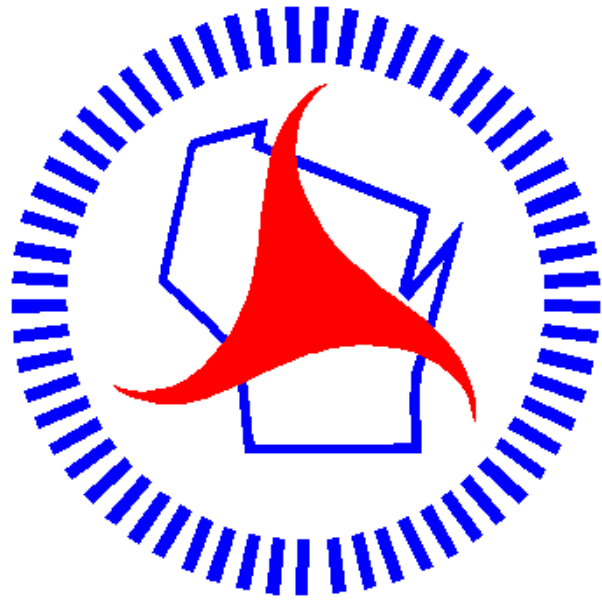


APPROVED
9/22/1999 /S/ Rory L. Rhinehart
DATE CHIEF ROADWAY DEVELOPER 162 NEER

STATION	CUT	FILL (-)	LARGEST CUT
	C.Y.	C.Y.	IN FEET
6+00	45	0	1.08
6+50	191	0	1.08
7+00	133	0	1.08
7+50	229	0	1.08
8+00	317	0	1.08
8+50	96	0	1.08
9+00	97	0	1.08
9+50	97	0	1.08
10+00	97	0	1.08
10+50	97	0	1.08
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13+50	75	0	1.08
14+00	229	0	1.08
14+50	97	0	1.08
15+00	97	0	1.08
15+50	97	0	1.08
16+00	97	0	1.08
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19+50	97	0	1.08
20+00	97	0	1.08
20+50	143	0	1.08
21+00	101	0	1.08
21+50	97	0	1.08
22+00	97	0	1.08
22+50	97	0	1.08
23+00	97	0	1.08
23+50	97	0	1.08
24+00	97	0	1.08
24+50	97	0	1.08
25+00	97	0	1.08
25+50	97	0	1.08
26+00	97	0	1.08

26+50	97	0	1.08
27+00	93	0	1.08
27+50	96	0	1.08
28+00	97	0	1.08
28+50	97	0	1.08
29+00	97	0	1.08
29+50	97	0	1.08
30+00	97	0	1.08
30+50	121	0	1.08
31+00	99	0	1.08
31+50	97	0	1.08
32+00	97	0	1.08
32+50	97	0	1.08
33+00	98	0	1.08
33+50	80	0	1.08
34+00	3	0	1.08

EARTHWORK SUMMARY	
COMMON EXCAVATION (205.0100)	6,029 CY
(Includes 3,718 CY Pav't Removal)	
Fill (Includes 20% shrinkage)	0 CY
Waste	6,029 CY



Wisconsin Department of Transportation

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