

LOCATION MAP
N.T.S.

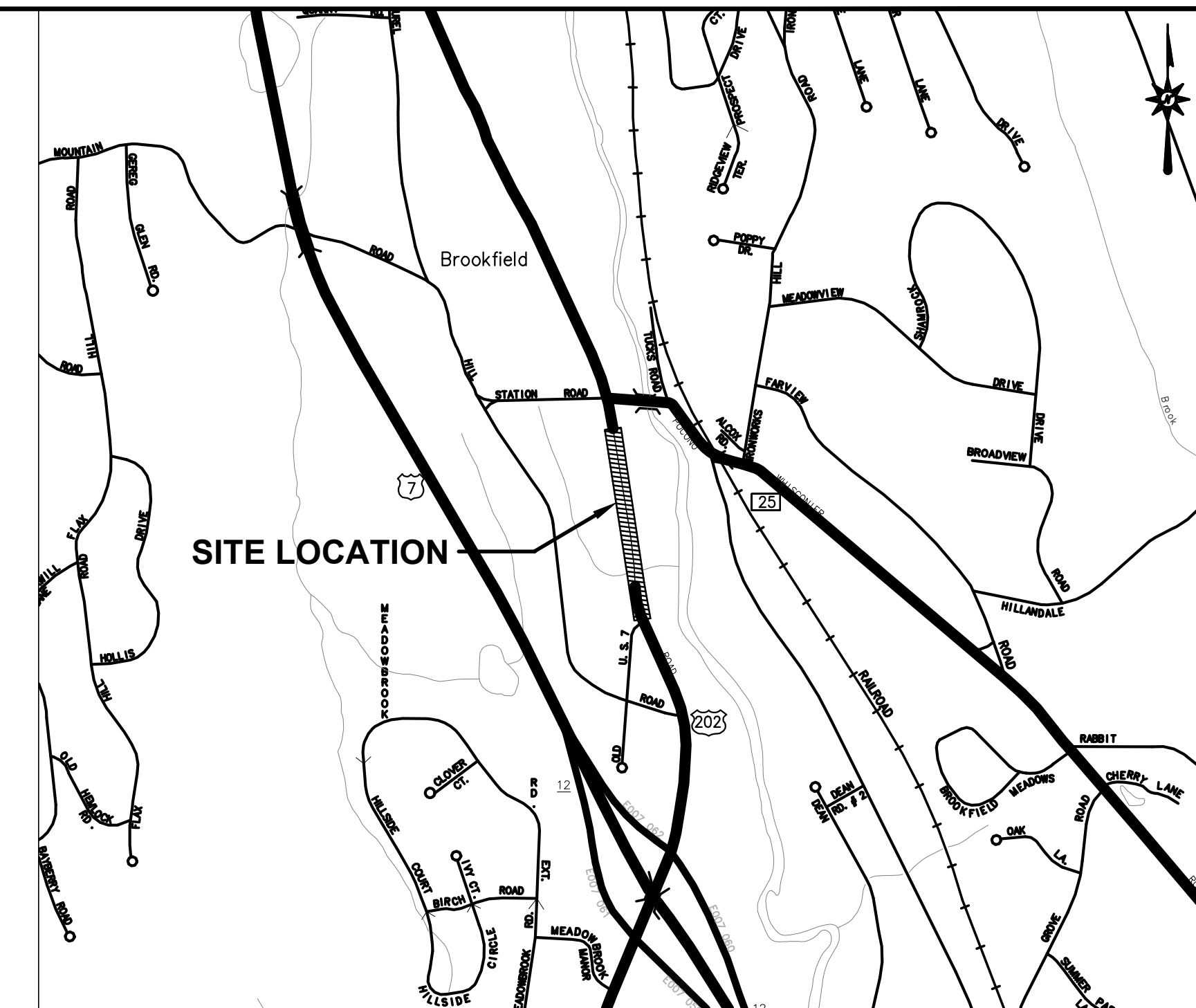
CONSTRUCTION PLANS

FOR

BROOKFIELD STREETScape PHASE II

TOWN OF BROOKFIELD, CT

STATE PROJECT NO. 0018-0136
FAP NO. 0202(015)



VICINITY MAP
SCALE: 1"=1000'

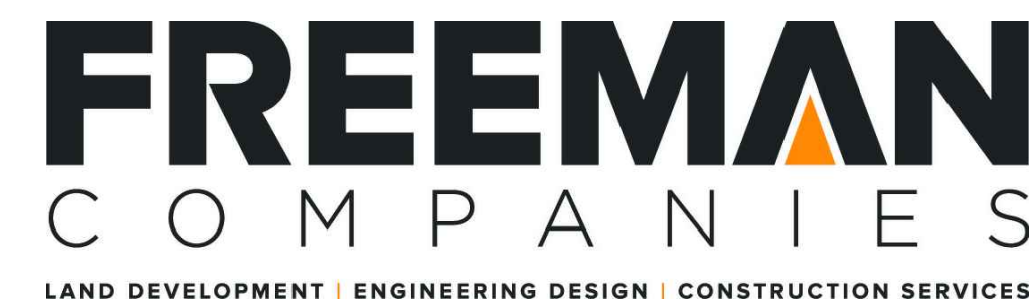
PREPARED FOR:

TOWN OF BROOKFIELD

ROUTE 202, FEDERAL ROAD

BROOKFIELD, CONNECTICUT, 06804

PREPARED BY:



36 JOHN STREET
HARTFORD, CONNECTICUT 06106
TEL: (860) 251-9550
FAX: (860) 986-7161

GENERAL NOTES:

CONNECTICUT DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION, FORM 817, DATED 2016; SUPPLEMENTAL SPECIFICATIONS, DATED JANUARY 2018; AND SPECIAL PROVISIONS.

ALL HORIZONTAL GEOMETRY ON THIS PROJECT IS BASED ON HORIZONTAL DATUM NAD83.

ALL ELEVATIONS ON THIS PROJECT BASED ON NAVD88.

DESIGN STANDARDS:

TOWN OF BROOKFIELD DESIGN STANDARDS

CONNECTICUT DEPARTMENT OF TRANSPORTATION HIGHWAY DESIGN MANUAL, 2003 EDITION.

A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS 2011 EDITION, PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).

TOWN OF BROOKFIELD, CONNECTICUT

APPROVED BY:

STEVE DUNN
FIRST SELECTMAN

DATE

DESIGN BY: **FREEMAN**
COMPANIES
LAND DEVELOPMENT | ENGINEERING DESIGN | CONSTRUCTION SERVICES

YUYANG LIN, P.E., PTOE.
CT. PROFESSIONAL ENGINEER REG. NO. 23422

DATE: JAN 2019

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CTDOT TRAFFIC STANDARD SHEETS - 12 SHEETS

DATES

ISSUE DATE: JANUARY 2019
REVISION:

Freeman Companies, LLC - R:\2017\2017-0603 Brookfield Streetscape Phase 2.DWG\Detailed Estimate.dwg Mar 07, 2019-4:52pm Plotted By: plskuri

ITEM NUMBER	ITEM	UNIT	FEDERAL ROAD	UNASSIGNED	TOTAL
0201001	CLEARING AND GRUBBING	L.S.	1	0	1
0202001	EARTH EXCAVATION	C.Y.	292	8	300
0202451	TEST PIT EXCAVATION	EA.	0	5	5
0202529	CUT BITUMINOUS CONCRETE PAVEMENT	L.F.	1555	15	1570
0209001	FORMATION OF SUBGRADE	S.Y.	138	12	150
0211000	ANTI-TRACKING PAD	S.Y.	32	3	35
0212000	SUBBASE	C.Y.	100	5	105
0219001	SEDIMENTATION CONTROL SYSTEM	L.F.	1004	16	1020
0219011A	SEDIMENT CONTROL SYSTEM AT CATCH BASIN	EA.	13	0	13
0286001.1	ROCK IN DRAINAGE TRENCH EXCAVATION 0'-10' DEEP	C.Y.	10	5	15
0406171	HMA S0.5	TON	120	5	125
0406172	HMA S0.375	TON	330	5	335
0406236	MATERIAL FOR TACK COAT	GAL.	315	5	320
0406273A	FINE MILLING OF BIT. CONCRETE (0" TO 4")	S.Y.	3130	10	3140
0406600	MATERIAL TRANSFER VEHICLE	TON	330	5	335
0507014	TYPE "C" CATCH BASIN FRAME & GRATE	EA.	6	0	6
0507119	GRANITE CURB CATCH BASIN INLET	EA.	6	0	6
0586050.1	TYPE "C-L" CB DOUBLE GRATE TYPE II - 0'-10' DEEP	EA.	2	0	2
0586703	CONVERT CB TO MANHOLE	EA.	3	0	3
0601000	CLASS "A" CONCRETE	C.Y.	5	2	7
0686000.12	12" R.C.PIPE -0'-10' DEEP	L.F.	443	7	450
0686002.12	12" R.C.PIPE (CLASS V) -0'-10' DEEP	L.F.	41	4	45
0811012	PRECAST CONCRETE CURB - STRAIGHT	L.F.	425	5	430
0811013	PRECAST CONCRETE CURB - CURVED	L.F.	33	7	40
0813021A	6" GRANITE STONE CURBING (INCLUDE 1/4" BEVEL & THERMALISE TOP)	L.F.	1430	20	1450
0813031A	6" GRANITE CURVE STONE CURBING (INCLUDE 1/4" BEVEL & THERMALISE TOP)	L.F.	216	14	230
0813455	RADIAL GRANITE CURB DRIVEWAY RETURN	EA.	17	0	17
0814002	RESET GRANITE STONE CURBING	L.F.	196	4	200
0815001	BITUMINOUS CONCRETE LIP CURBING	L.F.	20	5	25
0913850A	HIGH VISIBILITY SAFETY FENCE	L.F.	190	10	200
0921001A	CONCRETE SIDEWALK	S.F.	12472	28	12500
0921005A	CONCRETE SIDEWALK RAMP	S.F.	130	10	140
0921018A	BRICK PAVERS	S.F.	4400	20	4420
0921039A	DETECTABLE WARNING STRIP (CAST IRON)	EA.	2	0	2
0922501	BITUMINOUS CONCRETE DRIVEWAY	S.Y.	220	10	230
0922999A	INLAID THERMOPLASTIC PAVEMENT MARKING SYSTEM	S.F.	300	8	315
0924004	CONCRETE DRIVEWAY RAMP	C.Y.	282	8	290
0944000	FURNISHING AND PLACING TOPSOIL	S.Y.	610	10	620
0945060A	PINE BARK MULCH	S.Y.	165	5	170
0947210A	BICYCLE RACK	EA.	1	0	1
0947305A	INSTALL BUS SHELTER	EA.	1	0	1
0947306A	INSTALL CLUSTER BOX UNIT	EA.	1	0	1
0949131A	SYRINGA RETICULATA 'IVORY SILK' - JAPANESE TREE LILAC 2-2.5" CAL. B B	EA.	1	0	1
0949568A	PERNISETUM 'HAMELIN' - HAMELIN FOUNTAIN GRASS - 2 GAL	EA.	76	0	76
0949569A	PEROVSKIA TRIPLICIFOLIA 'LITTLE SPIRES' - LITTLE SPIRES RUSSIAN SAGE - 2 GAL	EA.	17	0	17
0949606A	ROOT BARRIER	L.F.	835	15	850
0949874A	LIQUIDAMBAR STYRACIFLUA 'MORAINÉ' - MORAINÉ AMER. SWEETSUM 2.5-3" CAL. B B	EA.	1	0	1
0949947	GLEDITSIA TRIACANTHOS INERMIS THORNLESS HONEYLOCUST SHADE MASTER 2.5-3" CAL. B.B.	EA.	7	0	7
0950005A	TURF ESTABLISHMENT	S.Y.	466	14	480
0969060A	CONSTRUCTION FIELD OFFICE (SMALL)	MO.	4	0	4
0970006	TRAFFICPERSON MUNICIPAL POLICE OFFICER)	EST.	1	0	1
0970007	TRAFFICPERSON (UNIFORMED FLAGGER)	HR.	150	0	150
SUBTOTAL			1	0	1
UNASSIGNED			8	5	13
TOTAL			9	5	14

ITEM NUMBER	ITEM	UNIT	FEDERAL ROAD	UNASSIGNED	TOTAL
0971001A	MAINTENANCE AND PROTECTION OF TRAFFIC	L.S.	1	0	1
0973004	MOBILIZATION AND PROJECT CLOSEOUT	L.S.	1	0	1
0976002	BARRICADE WARNING LIGHTS - HIGH INTENSITY	DAY.	1200	0	1200
0977001	TRAFFIC CONE	EA.	20	0	20
0978002	TRAFFIC DRUM	EA.	20	0	20
0880001	CONSTRUCTION STAKING	L.S.	1	0	1
1001001	TRENCHING AND BACKFILLING	L.F.	135	5	140
1003894A	ORNAMENTAL LIGHT SYSTEM	L.S.	1	0	1
1008115	2" RIGID METAL CONDUIT - IN TRENCH	L.F.	95	5	100
1008215	2" RIGID METAL CONDUIT - UNDER ROADWAY	L.F.	40	5	45
1010001	CONCRETE HANDHOLE	EA.	1	0	1
1113005	2 CONDUCTOR NO.8 AWG TYPE SE STYLE THW	L.F.	63	7	70
1113103	7 CONDUCTOR NO.14CABLE	L.F.	72	8	80
1117111A	RECTANGULAR RAPID FLASHING BEACON (RRFB) TYPE B	EA.	2	0	2
1206023A	REMOVAL AND RELOCATION OF EXISTING SIGNS	L.S.	1	0	1
1208931A	SIGN FACE - SHEET ALUMINUM (TYPE IX REFLECTIVE SHEETING)	S.F.	51	9	60
1209114	HOT-APPLIED PAINTED PAVEMENT MARKINGS YELLOW	L.F.	1530	20	1550
1209124	HOT-APPLIED PAINTED PAVEMENT MARKINGS WHITE	L.F.	1430	20	1450
1210101	4" WHITE EPOXY PAVEMENT MARKINGS	L.F.	1490	10	1500
1210102	4" YELLOW EPOXY PAVEMENT MARKINGS	L.F.	1530	20	1550
1210105	EPOXY RESIN PAVEMENT, MARKINGS, SYMBOLS, AND LEGENDS	S.F.	365	5	370
1220027	CONSTRUCTION SIGNS	S.F.	200	10	210
1403501	RESET MANHOLE (SANITARY)	EA.	6	0	6
SUBTOTAL			1	0	1
UNASSIGNED			0	0	0
TOTAL			1	0	1

ITEM NUMBER	ITEM	UNIT	FEDERAL ROAD	UNASSIGNED	TOTAL
1500123A	BID ALTERNATE NO.1 ITEM	L.S.	1	0	1
	CONCRETE DUCT BANK				
SUBTOTAL			1	0	1
UNASSIGNED			0	0	0
TOTAL			1	0	1

NOT A LEGAL DEFINITION

NP= FEDERAL AID NON PARTICIPATING
=FOR INTERNAL USE ONLY

A = ** See Special Provisions **

FREEMAN COMPANIES
 DBE | DAS | MBE | GNISDC CERTIFIED
 CIVIL | GEOTECHNICAL | SURVEY | ENVIRONMENTAL
 FREEMAN COMPANIES, LLC
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 HARTFORD, CT 06106
 WWW.FREEMANCO.COM
 (860)251-9500
 TOLL FREE: (800)264-5141
 FAX: (860)251-7141
 ELEVATE YOUR EXPECTATIONS

PREPARED FOR
 TOWN OF BROOKFIELD
 100 POCONO ROAD
 BROOKFIELD,
 CONNECTICUT 06804

OWNER FOR
 TOWN OF BROOKFIELD
 100 POCONO ROAD
 BROOKFIELD,
 CONNECTICUT 06804

YUYANG LIH, PE, PTOE NO. 23423

BROOKFIELD STREETSCAPE PHASE II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT

DESIGNED:	YL	TITLE:	DETAILED ESTIMATE
DRAFTED:	PT	SHEET NUMBER:	DE-1
CHECKED:	RG		
APPROVED:			
SCALE:	1" = 5'		
PROJECT NO.:	2017-0605		
DATE:	03/7/2019		
FILE:	Detailed Estimate		

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF FREEMAN COMPANIES, LLC

SURVEY NOTES

THIS SURVEY HAS BEEN PREPARED BY FREEMAN COMPANIES, LLC. IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THRU 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

THE TYPE OF SURVEY PERFORMED IS A GENERAL LOCATION AND TOPOGRAPHIC SURVEY AND IS INTENDED TO DEPICT THE EXISTING CONDITIONS OF A PORTION OF FEDERAL ROAD.

THIS SURVEY CONFORMS TO HORIZONTAL ACCURACY CLASS A-2 IN REGARDS TO EXISTING CONDITIONS AND ROUTE 202 RIGHT OF WAY LINES, AND TOPOGRAPHIC ACCURACY T-2 IN REGARDS TO CONTOUR AND SPOT GRADE DATA. PROPERTY LINES CONFORM TO HORIZONTAL ACCURACY CLASS D.

NORTH ARROW AND COORDINATE VALUES REFER TO NAD83 AND ARE BASED UPON MAP REFERENCE "A".

ELEVATIONS REFER TO NAVD 88 AND ARE BASED UPON MAP REFERENCE "A".

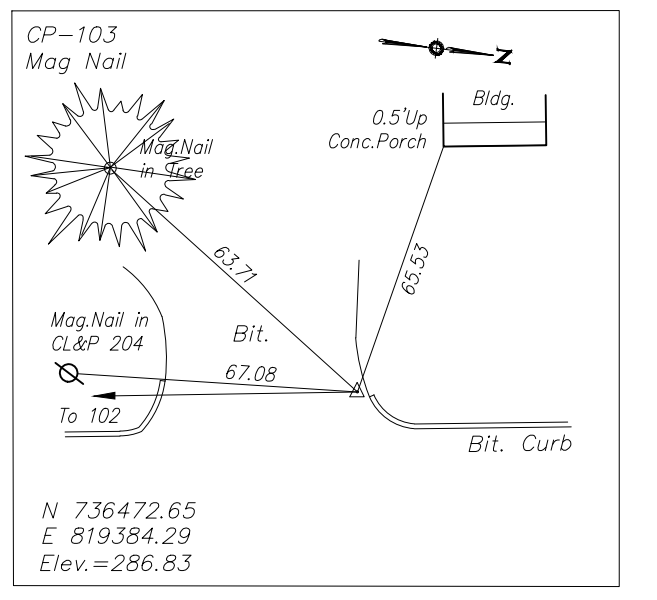
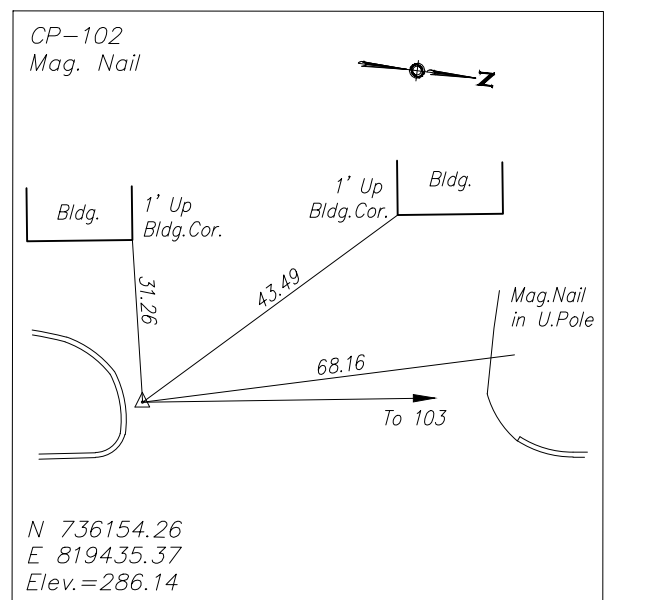
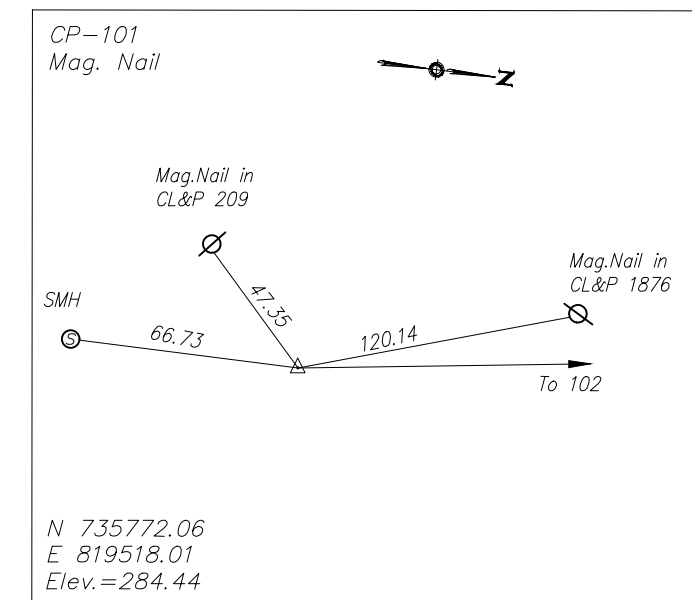
THE UNDERGROUND FEATURES DEPICTED HEREON ARE THE RESULT OF COMPILATION OF EXISTING MAPPING AND LOCATION OF UTILITY PAINT. ACTUAL LOCATION OF UNDERGROUND UTILITIES IS TO BE CONSIDERED TO BE APPROXIMATE AT BEST. OTHER UTILITIES MAY EXIST WHICH FREEMAN COMPANIES ARE UNAWARE OF. VERIFY INFORMATION IN THE FIELD. BEFORE ANY DIGGING OR SITE EXCAVATION CALL "CALL BEFORE YOU DIG" 1-800-922-4455.

MAP REFERENCES

A. "TOPOGRAPHIC SURVEY, FEDERAL ROAD (ROUTE 202) & WHISCONIER ROAD (ROUTE 25), BROOKFIELD, CONNECTICUT" SCALE: 1"=20'; DATE: DECEMBER, 2013; AND PREPARED BY URS CORPORATION.

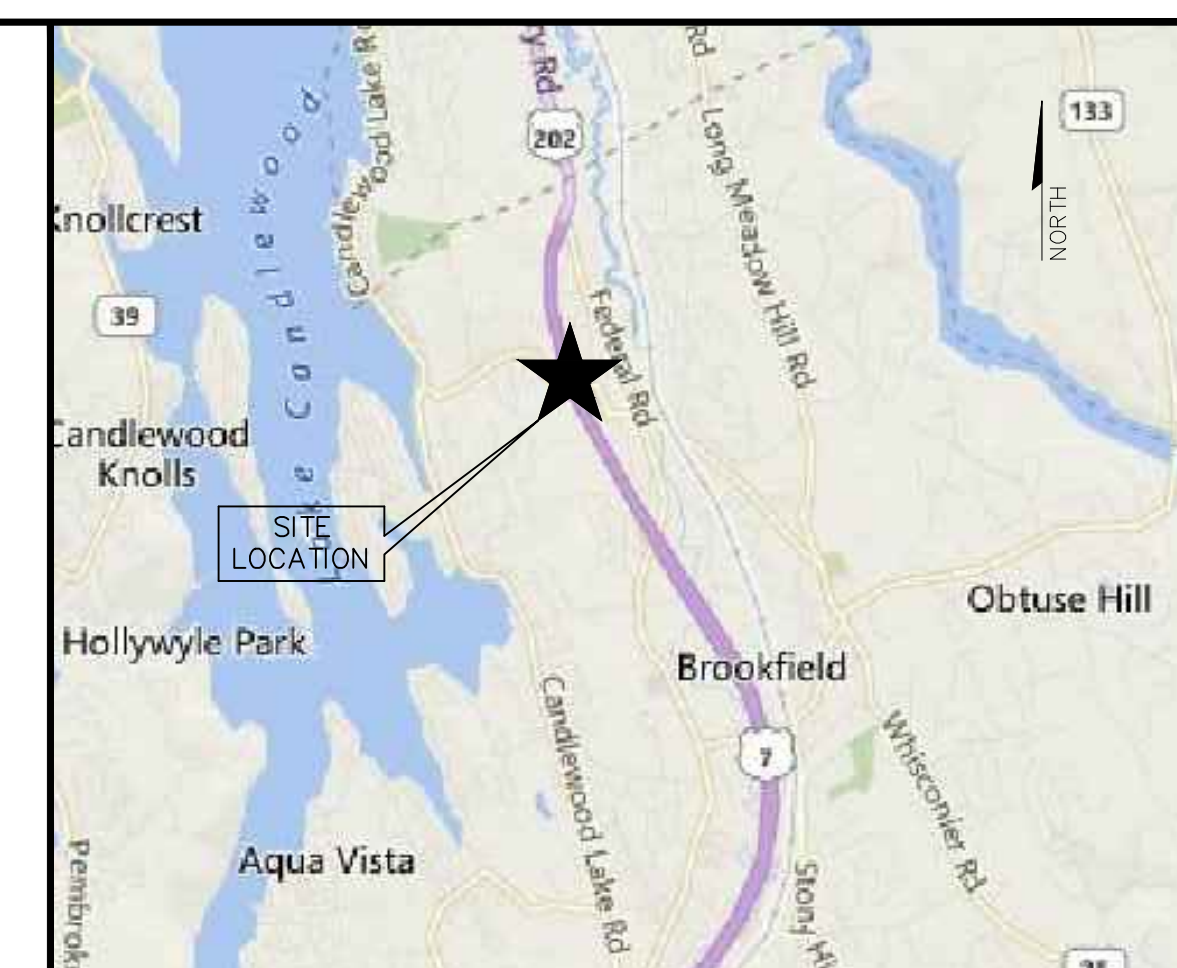
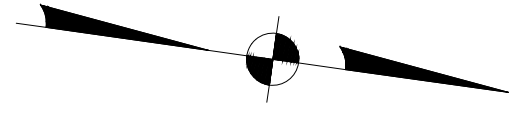
B. "STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP, TOWN OF BROOKFIELD, DANBURY + NEW MILFORD ROAD NORTHERLY 1,320 FEET NORTH OF POCONO ROAD" SCALE: 1"=40'; STAMPED PRELIMINARY, SHEET 3A OF 4, AND PREPARED BY CTDOT.

C. "CONNECTICUT STATE HIGHWAY DEPARTMENT RIGHT OF WAY MAP, TOWN OF BROOKFIELD, NEW MILFORD - DANBURY ROAD FROM THE BROOKFIELD CENTER ROAD NORTHERLY ABOUT 7,300 FEET, US ROUTE 7" SCALE: 1"=40'; DATE: JUNE 30, 1931; SHEET 3 OF 3; PREPARED BY CTDOT.



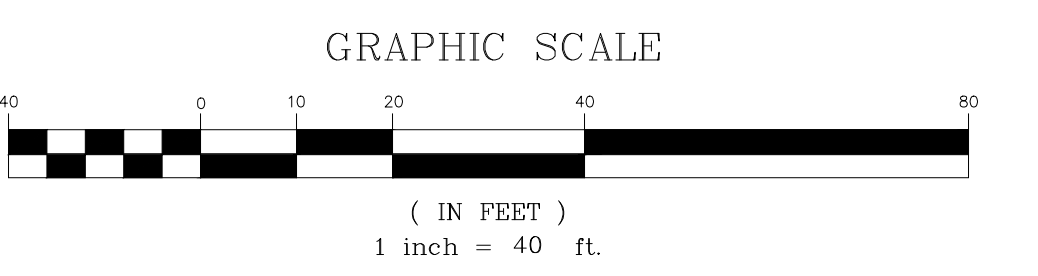
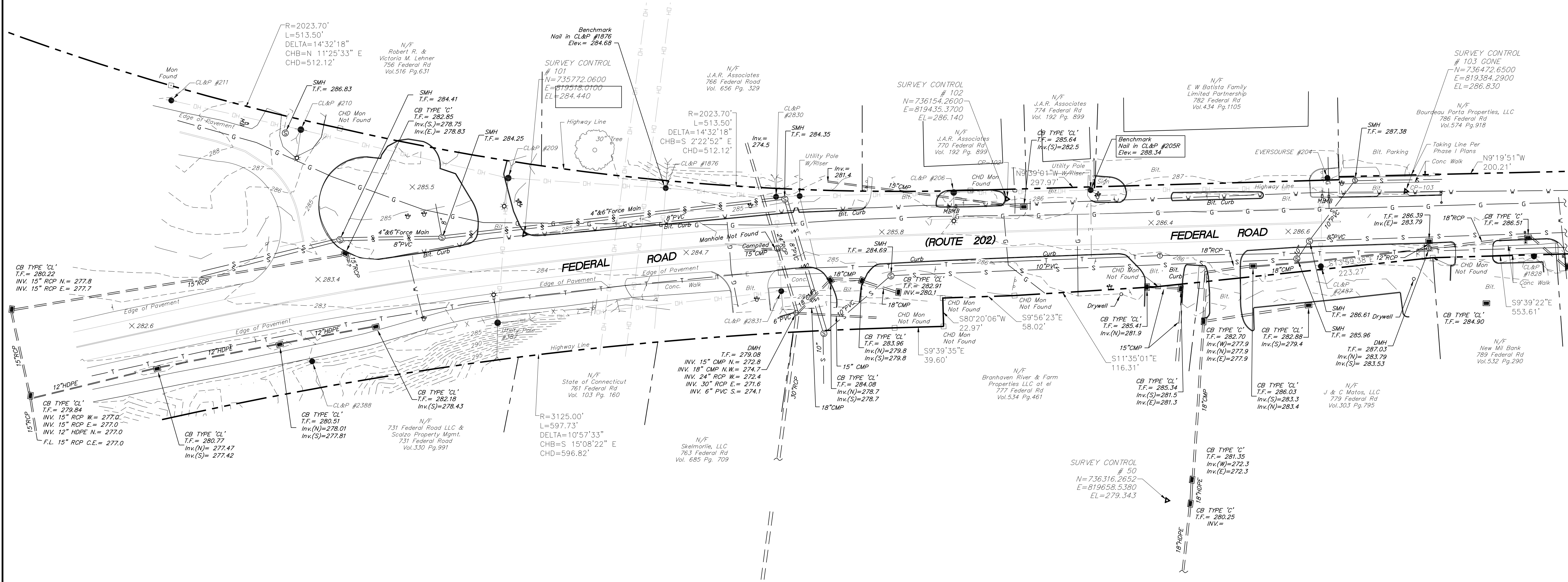
LEGEND

- PROPERTY LINE
- X-X- WATER LINE
- S-S- SANITARY LINE
- G-G- GAS LINE
- DH-DH- OVERHEAD WIRES
- M.S.L. METAL STREET LIGHT
- METAL POST
- Hyd. UTILITY POLE
- Fire Hydrant
- Sign
- Water Valve
○ Catch Basin
- Drainage Manhole
- Telephone Manhole
- Sanitary Manhole
- E.O.P. EDGE OF PAVEMENT
- Mailbox
- M.Well Monitoring Well
- Deciduous Tree



LOCATION MAP

NOT TO SCALE



NO.	DATE	DESCRIPTION	REVISIONS
1.	4/19/2018	CTDOT Comments	

FREEMAN COMPANIES, LLC
 DBE 1 SB 1 MBE 1 LBA 1 BIA 1 BIC 1 CERTIFIED
 LAND DEVELOPMENT
 ENGINEERING DESIGN
 CONSTRUCTION SERVICES

FREEMAN COMPANIES, LLC
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 HARTFORD, CT 06106
 WWW.FREEMANCS.COM
 (860)211-9550
 FAX:(860)766-7145

BROOKFIELD STREETScape PROJECT
 PREPARED FOR
TOWN OF BROOKFIELD
RTE. 202 FEDERAL RD.
BROOKFIELD, CONNECTICUT

SURVEYED: L.K./N.C.
 DRAFTED: M.G.
 APPROVED: M.G.
 SCALE: 1" = 40'
 PROJECT NO.: 2017-0605
 DATE: 10/30/2018
 CAD FILE: 2017-0605-SV01

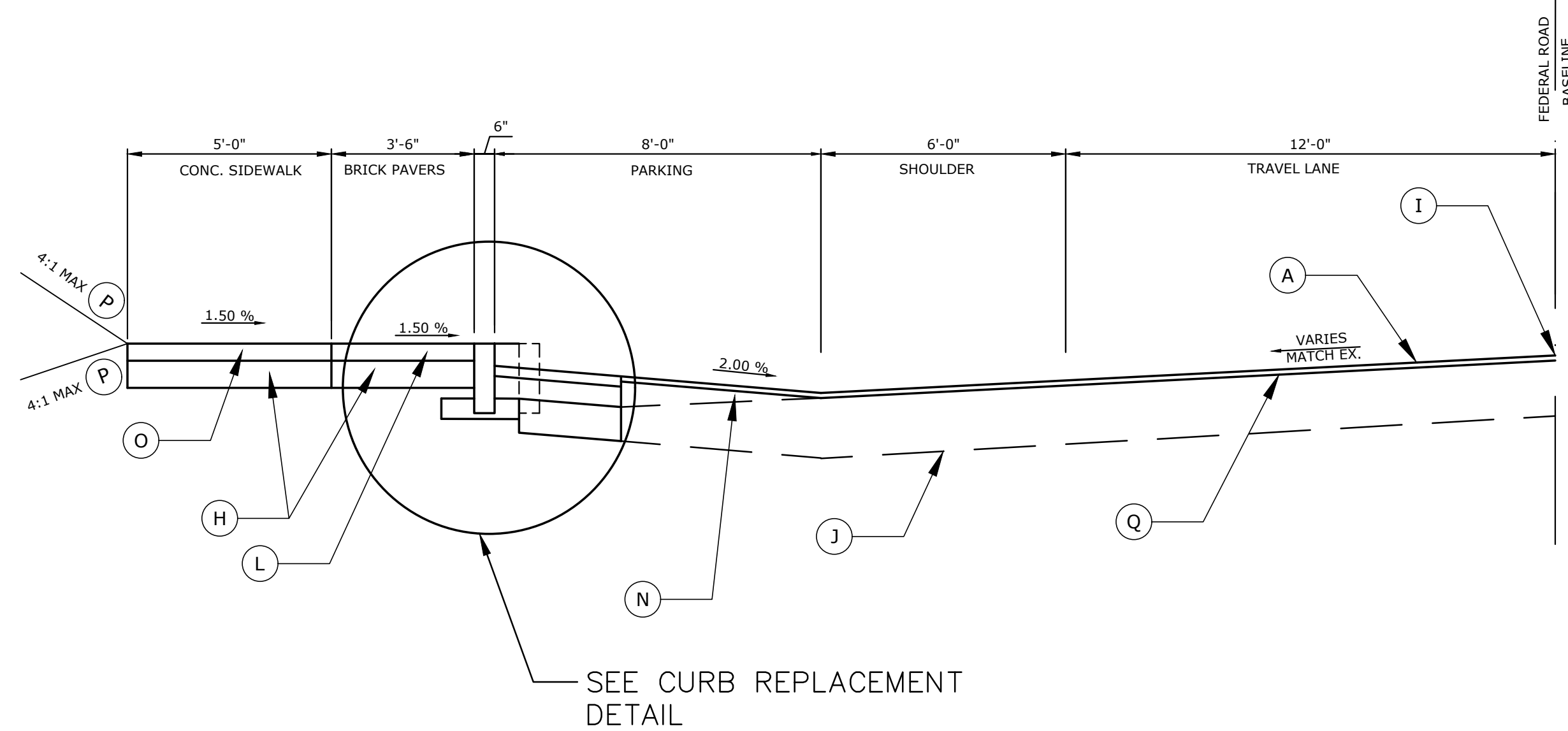
TITLE:
TOPOGRAPHIC SURVEY

EX-1

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

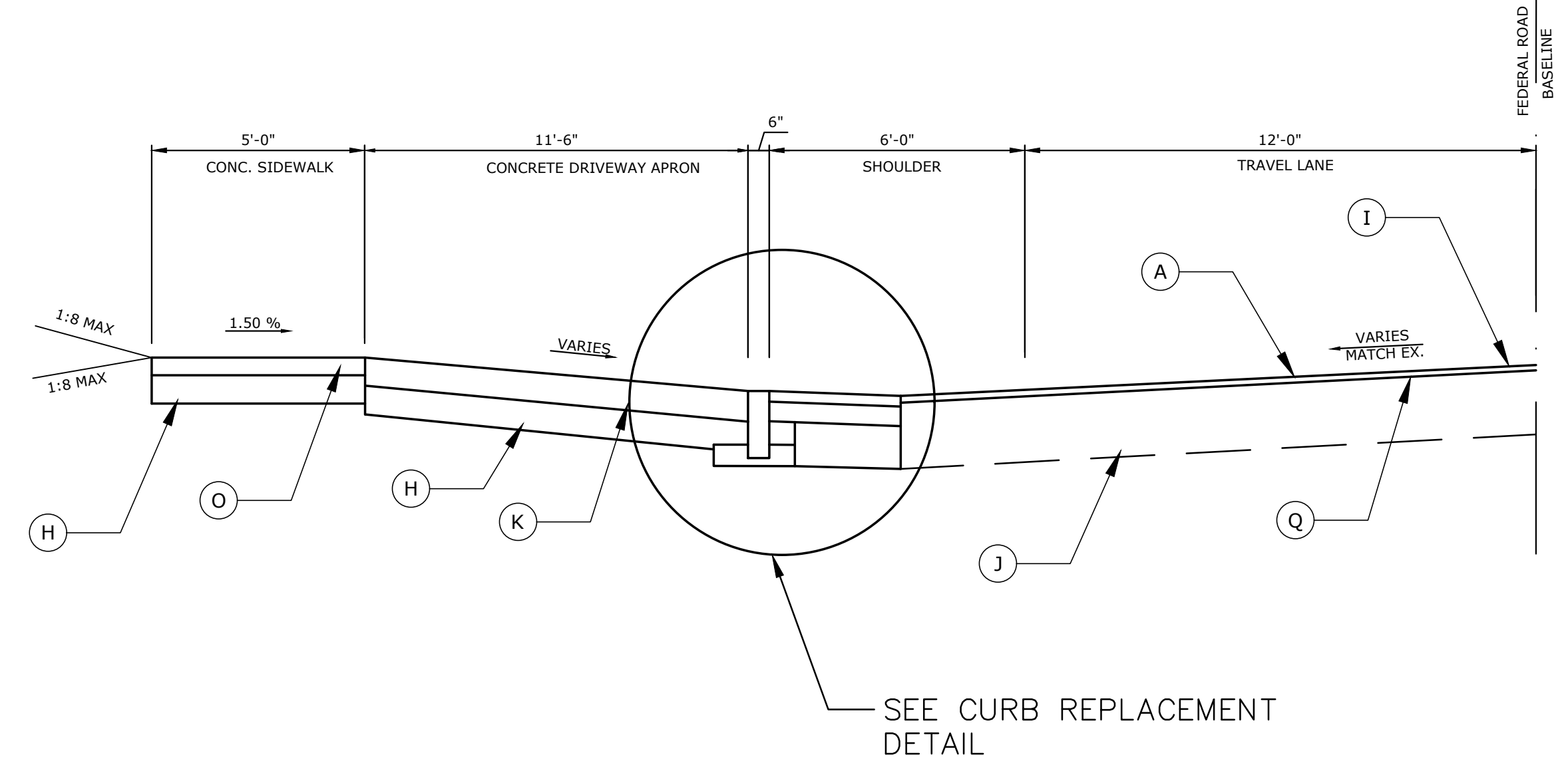
MICHAEL J. GARON L.S. #70366

NO CERTIFICATION IS EXPRESSED OR IMPLIED UNLESS THIS MAP BEARS THE ORIGINAL SIGNATURE AND EMBOSSED SEAL OF THE ABOVE NAMED LAND SURVEYOR.



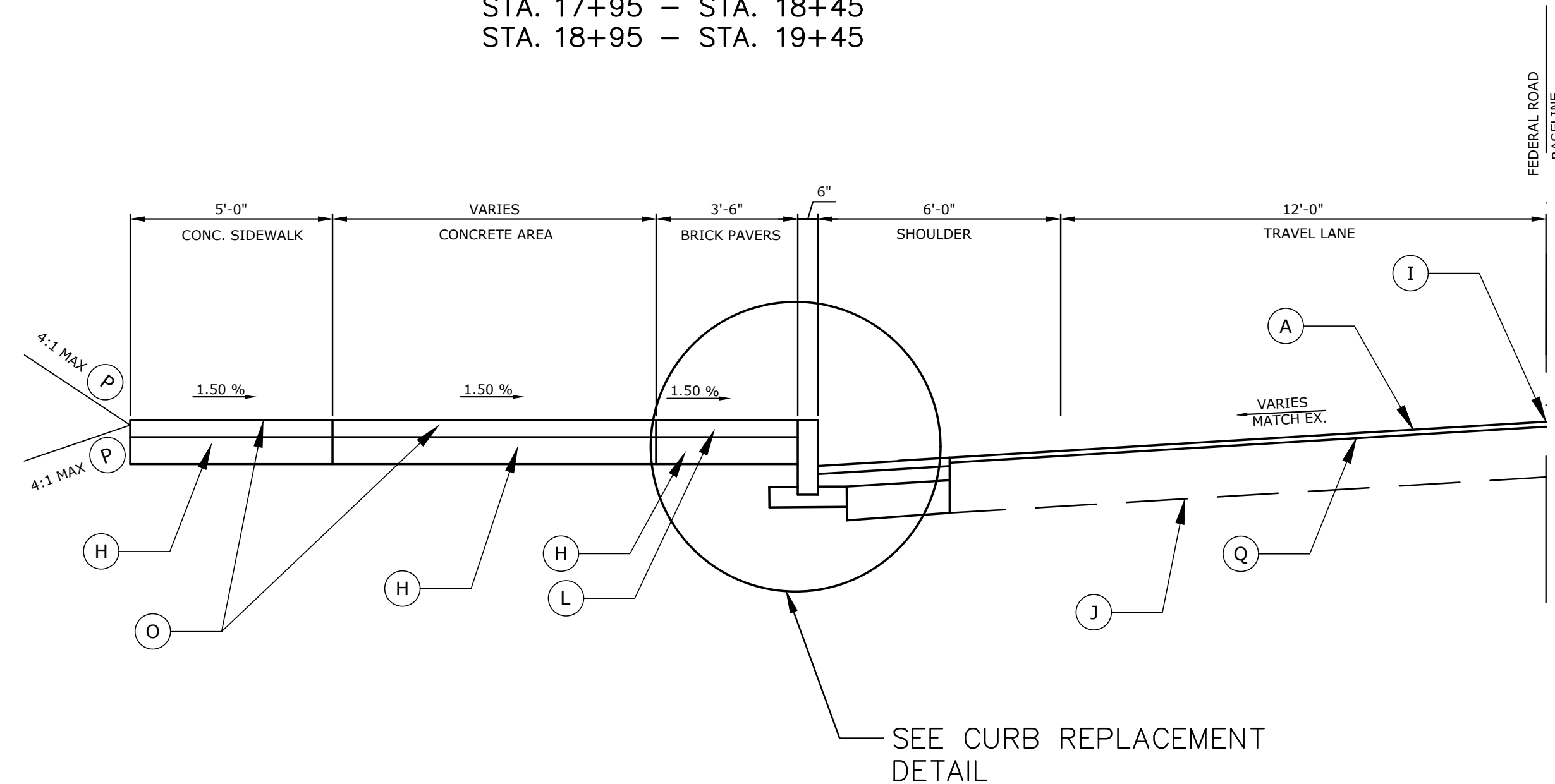
FEDERAL ROAD WEST SIDE TYPICAL SECTION NO. 1

STA. 13+90 – STA. 16+18
 STA. 16+90 – STA. 17+35
 STA. 17+95 – STA. 18+45
 STA. 18+95 – STA. 19+45



FEDERAL ROAD WEST SIDE TYPICAL SECTION NO. 2

STA. 16+53 – STA. 16+76
 STA. 17+59 – STA. 17+82
 STA. 18+57 – STA. 18+81
 STA. 19+80 – STA. 20+05



FEDERAL ROAD WEST SIDE TYPICAL SECTION NO. 3

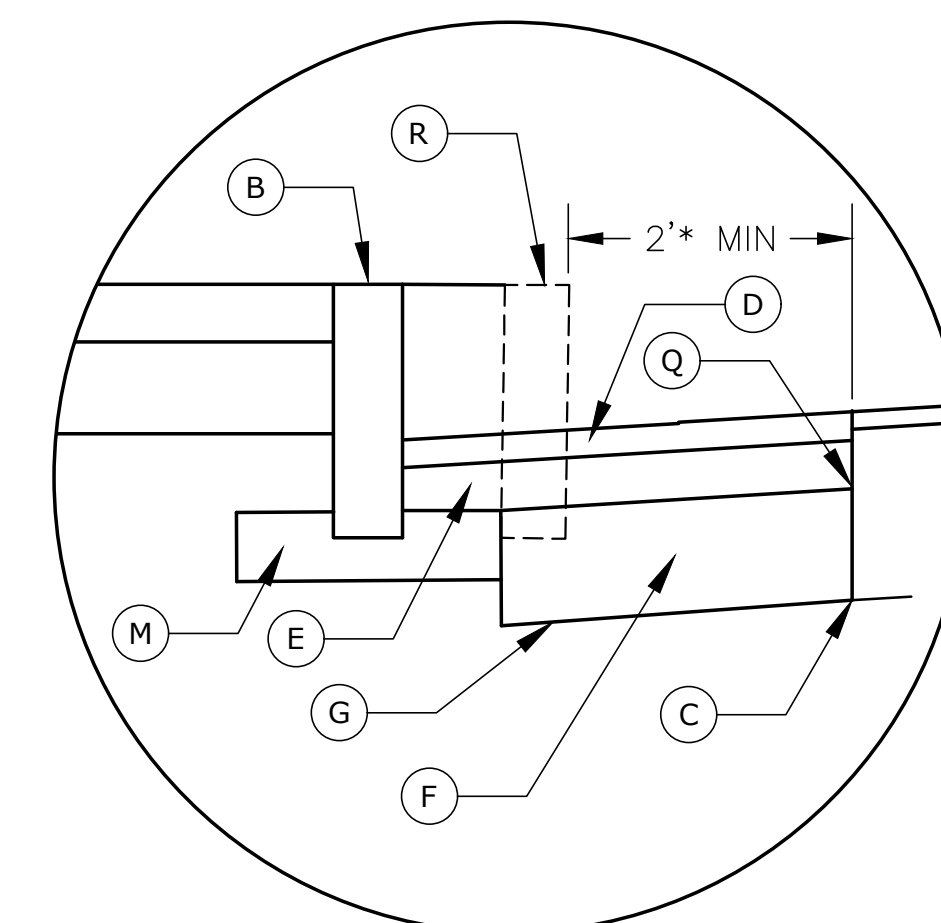
STA. 16+18 – STA. 16+53
 STA. 16+76 – STA. 16+90
 STA. 17+35 – STA. 17+59
 STA. 17+82 – STA. 17+95
 STA. 18+45 – STA. 18+57
 STA. 18+81 – STA. 18+95
 STA. 19+45 – STA. 19+80
 STA. 20+05 – STA. 20+29

TYPICAL SECTION LEGEND

- | | |
|---|--|
| (A) 1-1/2" MILL & 1-1/2" BITUMINOUS OVERLAY OF HMA S0.375 TRAFFIC LEVEL 2 | (J) EXISTING ROADWAY STRUCTURE |
| (B) GRANITE CURB | (K) 8" CLASS "F" CONCRETE*** |
| (C) SAW CUT PAVEMENT | (L) 2.25"x4"x8" BRICK PAVERS** |
| (D) 3" HMA S0.375 TRAFFIC LEVEL 2 (PLACED IN TWO LIFTS) | (M) 6" GRANULAR FILL |
| (E) 6" HMA S0.5 TRAFFIC LEVEL 2 (PLACED IN TWO LIFTS) | (N) HMA S0.375 SHIMMING (DEPTH VARIES FROM 0.5" TO 2.5") |
| (F) 10" SUBBASE | (O) 5" CLASS "F" CONCRETE |
| (G) FORMATION OF SUBGRADE | (P) 4" TOPSOIL AND TURF ESTABLISHMENT |
| (H) 8" GRANULAR FILL | (Q) TACK COAT |
| (I) POINT OF APPLICATION OF GRADE | (R) RESET EX. GRANITE CURB |
| (S) EMBANKMENT WALL | |

** SEE MDS-2 FOR DETAILS

*** SEE HIGHWAY STANDARD SHEET NO. HW-921-01



CURB REPLACEMENT DETAIL

* 2' MIN FROM EXISTING CURB OR EDGE OF ROAD.

**BROOKFIELD STREETSCAPE PHASE II
 ROUTE 202 (FEDERAL ROAD)
 BROOKFIELD, CONNECTICUT**



DBE | DAS | ABE | GNASDC CERTIFIED
 CIVIL | GEOTECHNICAL | SURVEY | ENVIRONMENTAL

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 FAX: (860) 695-7151

ELEVATE YOUR EXPECTATIONS

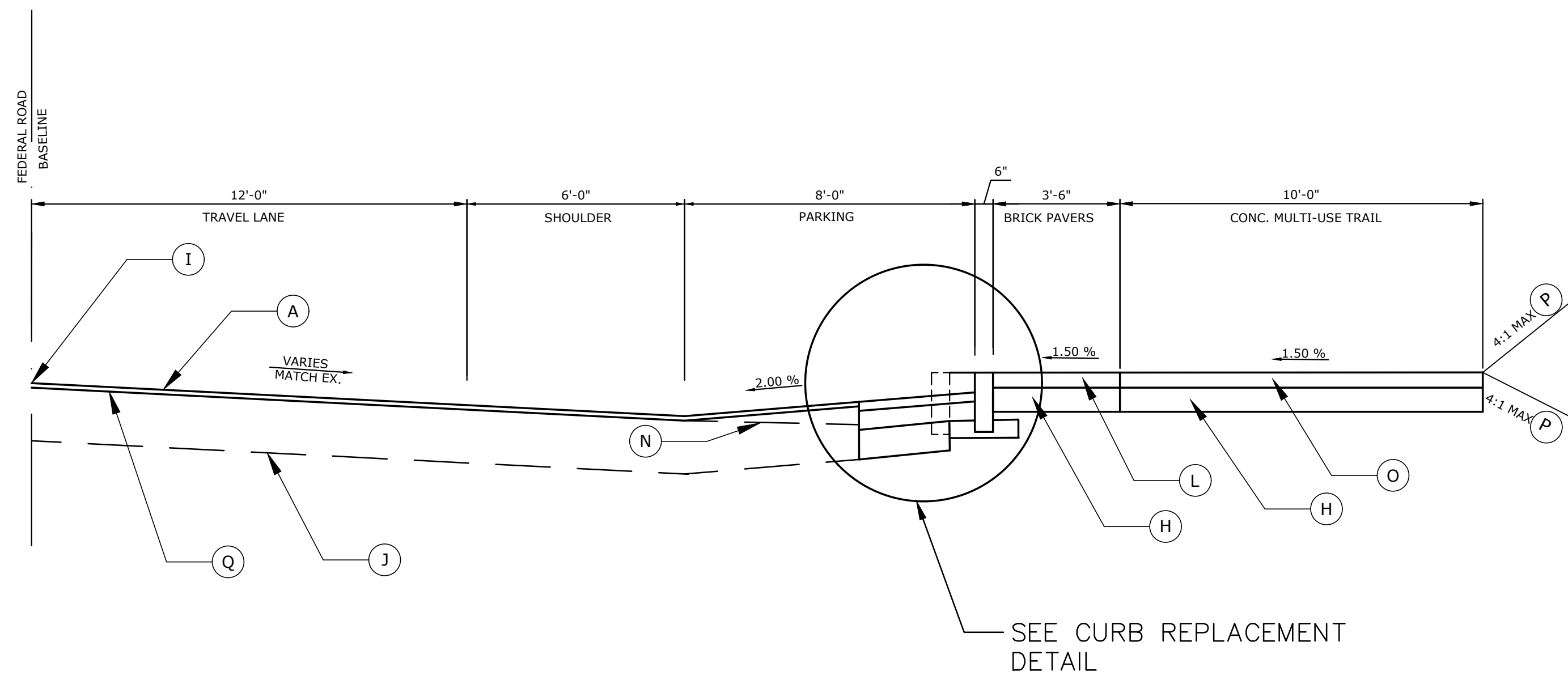
PREPARED FOR
 TOWN OF BROOKFIELD
 100 POCONO ROAD
 BROOKFIELD,
 CONNECTICUT 06804

OWNER FOR
 TOWN OF BROOKFIELD
 100 POCONO ROAD
 BROOKFIELD,
 CONNECTICUT 06804

TSYANG LIN, PE, PTOE NO. 23422

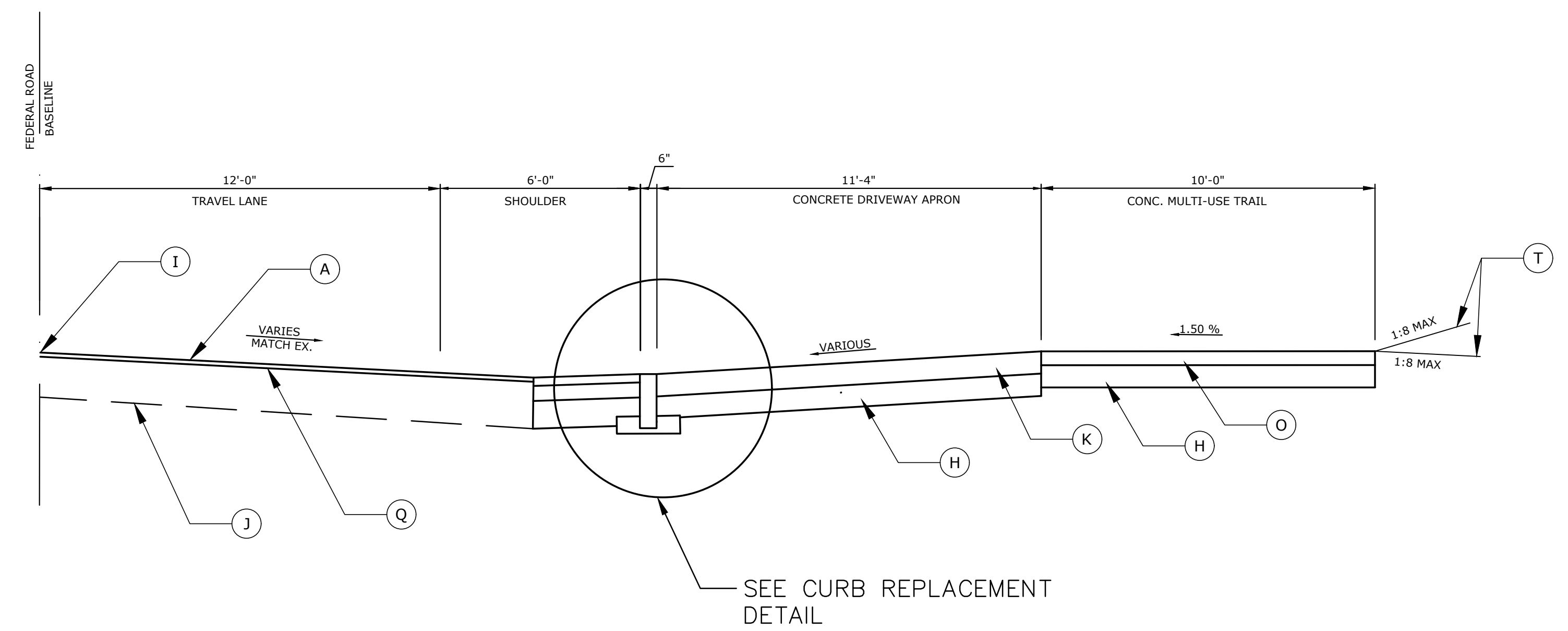
DESIGNED:	YL	
DRAFTED:	PT	
CHECKED:	RG	
APPROVED:		
SCALE:	NOT TO SCALE	
PROJECT NO.:	2017-0605	
DATE:	01/07/2019	
FILE:	HW_MSH_2017_0605_TYP	
NO.	DATE	DESCRIPTION
REVISIONS		

TITLE:	TYPICAL SECTION
SHEET NUMBER:	TYP-1



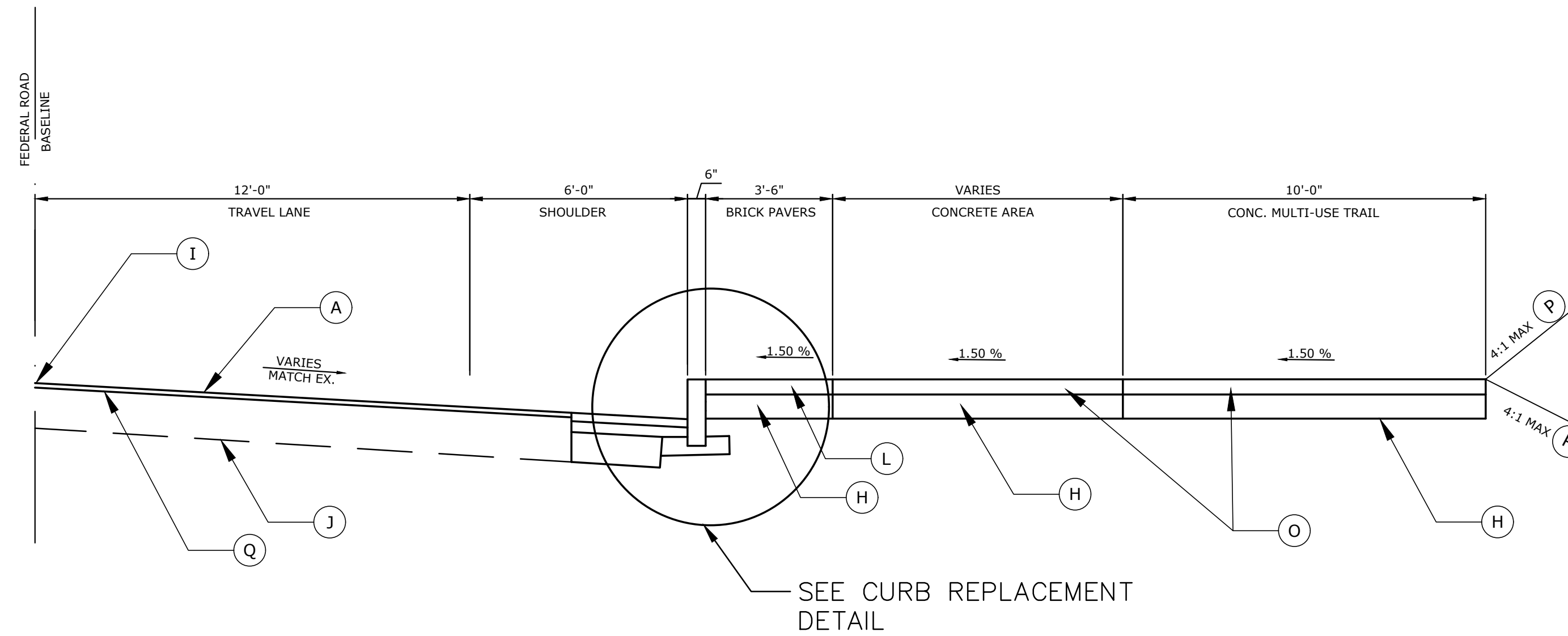
FEDERAL ROAD EAST SIDE TYPICAL SECTION NO. 1

STA. 14+57 – STA. 15+15
 STA. 16+60 – STA. 18+20



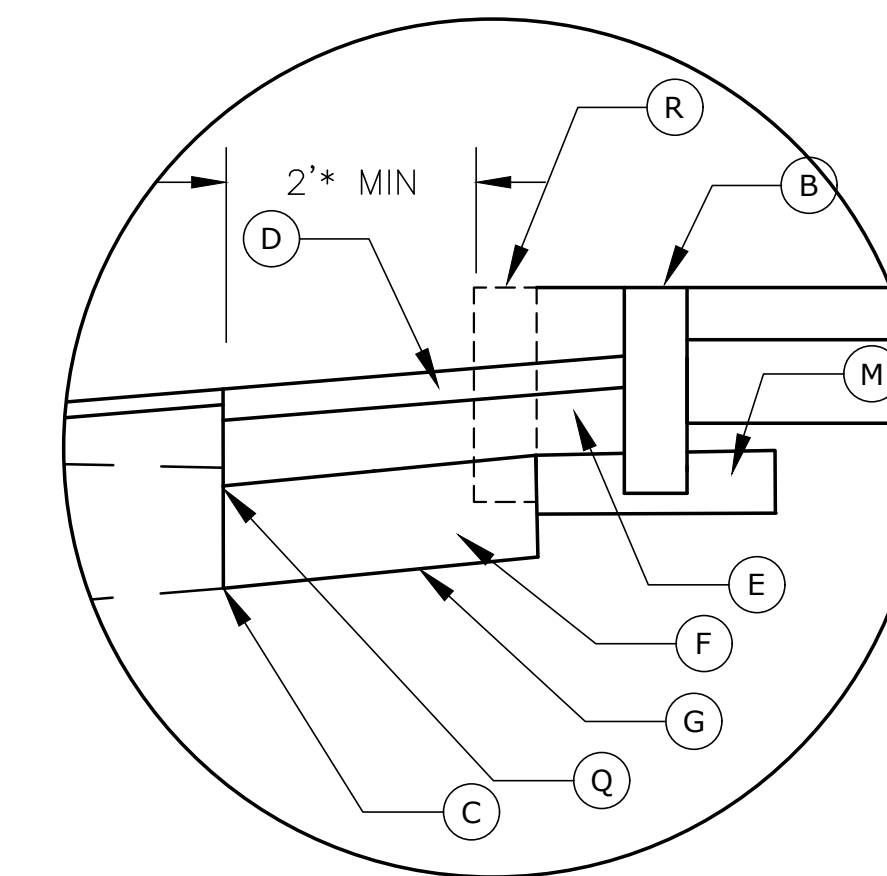
FEDERAL ROAD EAST SIDE TYPICAL SECTION NO. 2

STA. 15+38 – STA. 15+64
 STA. 16+16 – STA. 16+37
 STA. 18+32 – STA. 18+86
 STA. 19+22 – STA. 19+48



FEDERAL ROAD EAST SIDE TYPICAL SECTION NO. 3

STA. 14+48 – STA. 14+57
 STA. 15+15 – STA. 15+38
 STA. 15+64 – STA. 16+16
 STA. 16+37 – STA. 16+60
 STA. 18+20 – STA. 18+75
 STA. 18+99 – STA. 19+22
 STA. 19+48 – STA. 20+96



CURB REPLACEMENT DETAIL

TYPICAL SECTION LEGEND

- | | |
|---|--|
| (A) 1-1/2" MILL & 1-1/2" BITUMINOUS OVERLAY OF HMA S0.375 TRAFFIC LEVEL 2 | (I) POINT OF APPLICATION OF GRADE |
| (B) GRANITE CURB | (J) EXISTING ROADWAY STRUCTURE |
| (C) SAW CUT PAVEMENT | (K) 8" CLASS "F" CONCRETE*** |
| (D) 3" HMA S0.375 TRAFFIC LEVEL 2 (PLACED IN TWO LIFTS) | (L) 2.25"x4"x8" BRICK PAVERS** |
| (E) 6" HMA S0.5 TRAFFIC LEVEL 2 (PLACED IN TWO LIFTS) | (M) 6" GRANULAR FILL |
| (F) 10" SUBBASE | (N) HMA S0.375 SHIMMING (DEPTH VARIES FROM 0.5" TO 2.5") |
| (G) FORMATION OF SUBGRADE | (O) 5" CLASS "F" CONCRETE |
| (H) 8" GRANULAR FILL | (P) 4" TOPSOIL AND TURF ESTABLISHMENT |
| | (Q) TACK COAT |
| | (T) BITUMINOUS CONCRETE DRIVEWAY |

** SEE MDS-2 FOR DETAILS

*** SEE HIGHWAY STANDARD SHEET NO. HW-921-01

Freeman Companies, LLC - R:\2017\2017-0605 Brookfield Streetscape Phase 2\DWG\MSH_MSH_2017_0605_TYP.dwg, Jan 21, 2019-4:32pm Plotted By: plakuri

FREEMAN COMPANIES
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 HARTFORD, CT 06106
 WWW.FREEMANCO.COM
 (860) 511-9500
 TOLL FREE: (800) 604-5141
 FAX: (860) 696-7151
 ELEVATE YOUR EXPECTATIONS

PREPARED FOR
 TOWN OF BROOKFIELD
 100 POCONO ROAD
 BROOKFIELD,
 CONNECTICUT 06804

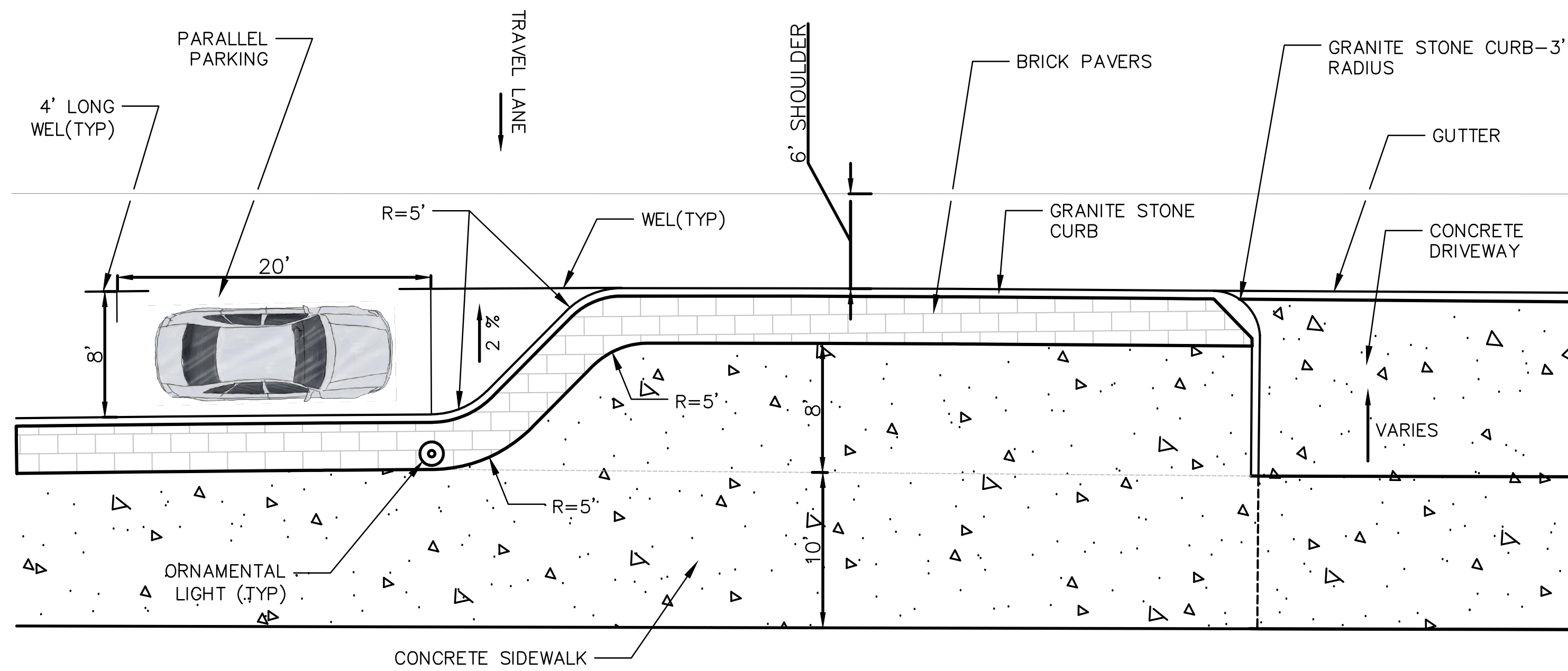
OWNER FOR
 TOWN OF BROOKFIELD
 100 POCONO ROAD
 BROOKFIELD,
 CONNECTICUT 06804

15YANG UN, PE, P10X NO. 23422

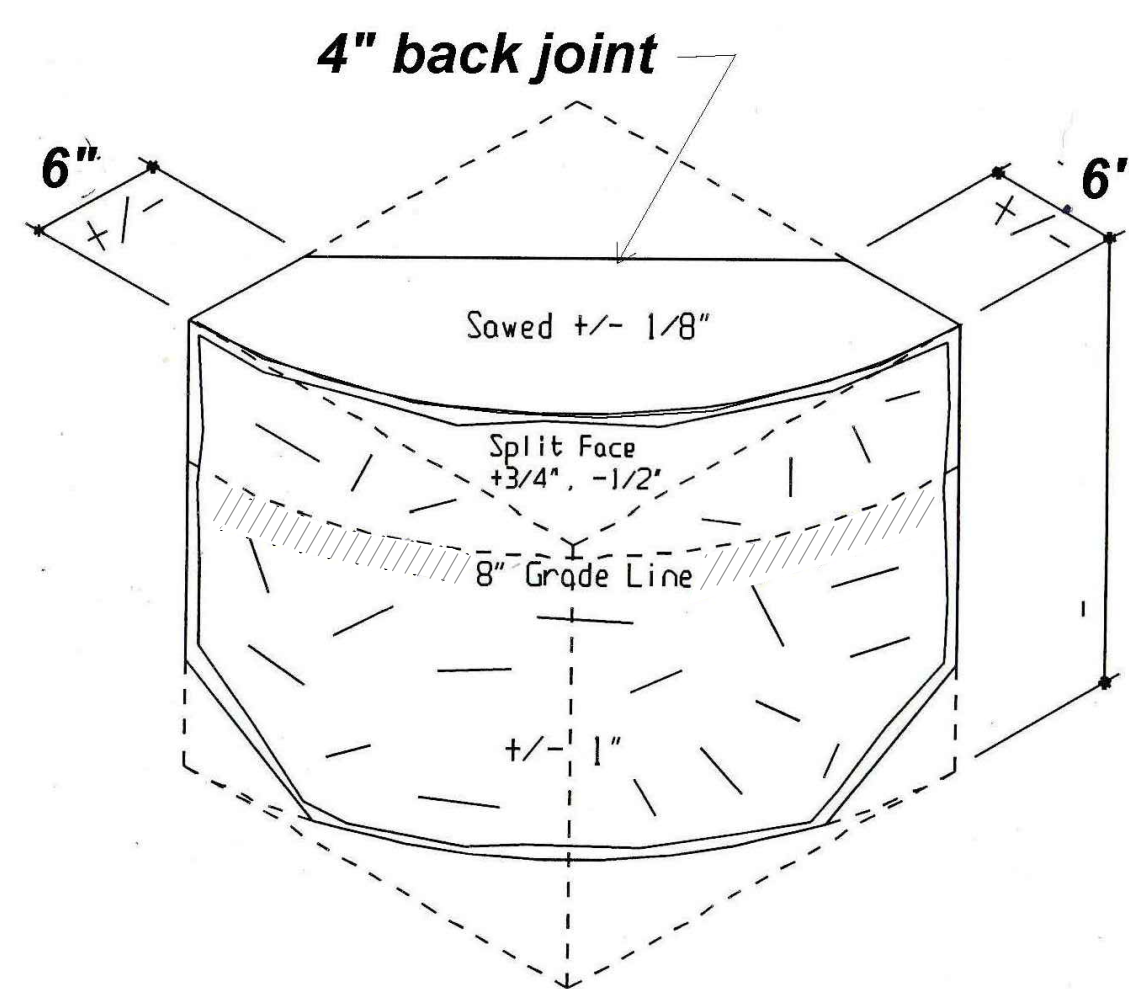
**BROOKFIELD STREETSCAPE PHASE II
 ROUTE 202 (FEDERAL ROAD)
 BROOKFIELD, CONNECTICUT**

DESIGNED:	YL
DRAFTED:	PT
CHECKED:	RG
APPROVED:	
SCALE:	NOT TO SCALE
PROJECT NO.:	2017-0605
DATE:	01/07/2019
FILE:	HW_MSH_2017_0605_TYP

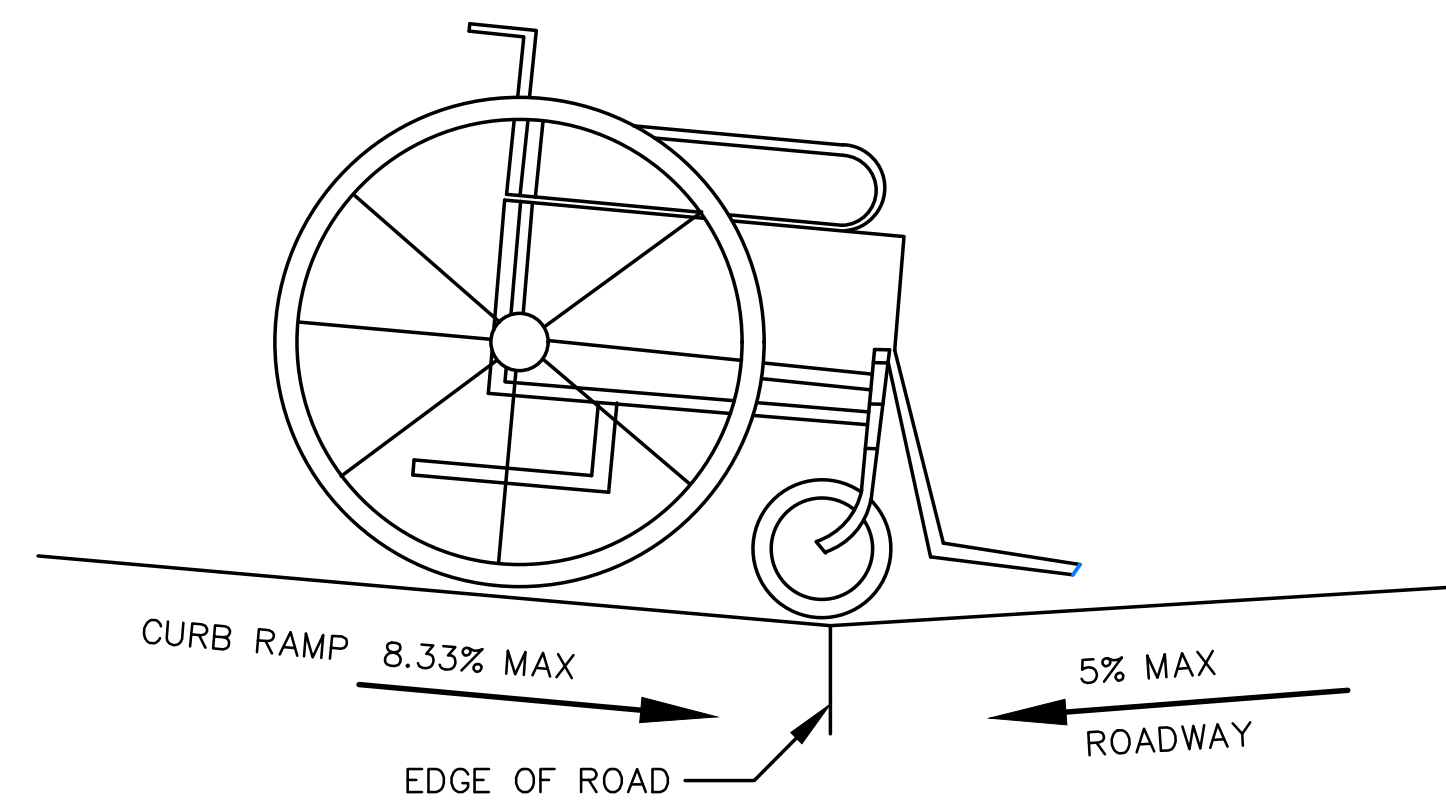
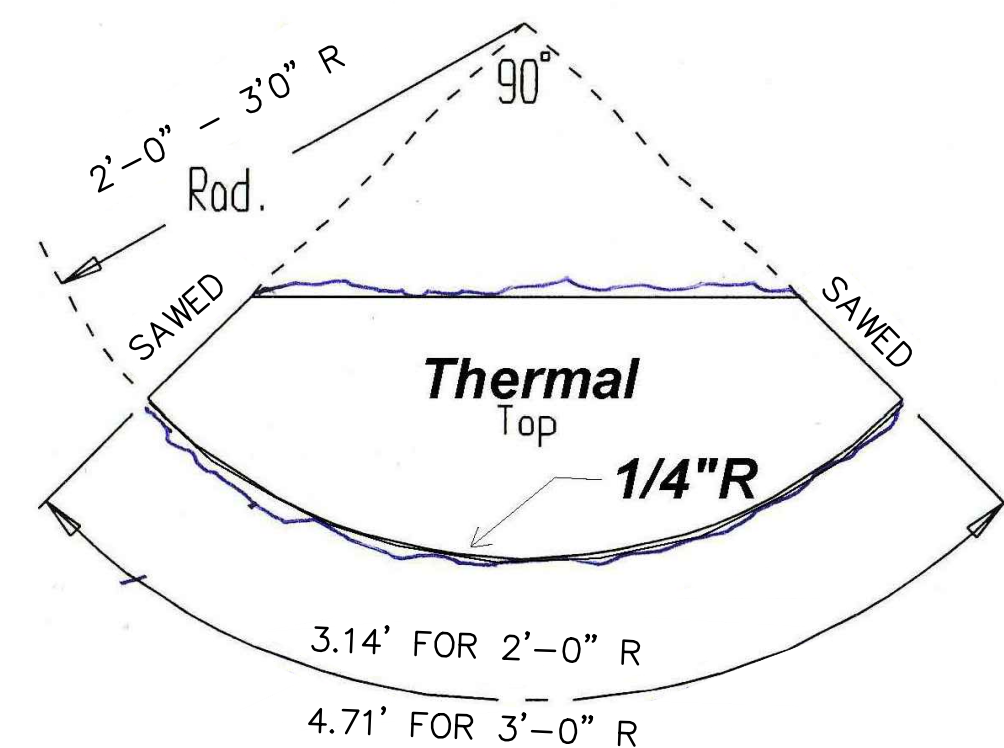
TITLE:	TYPICAL SECTION
SHEET NUMBER:	TYP-2



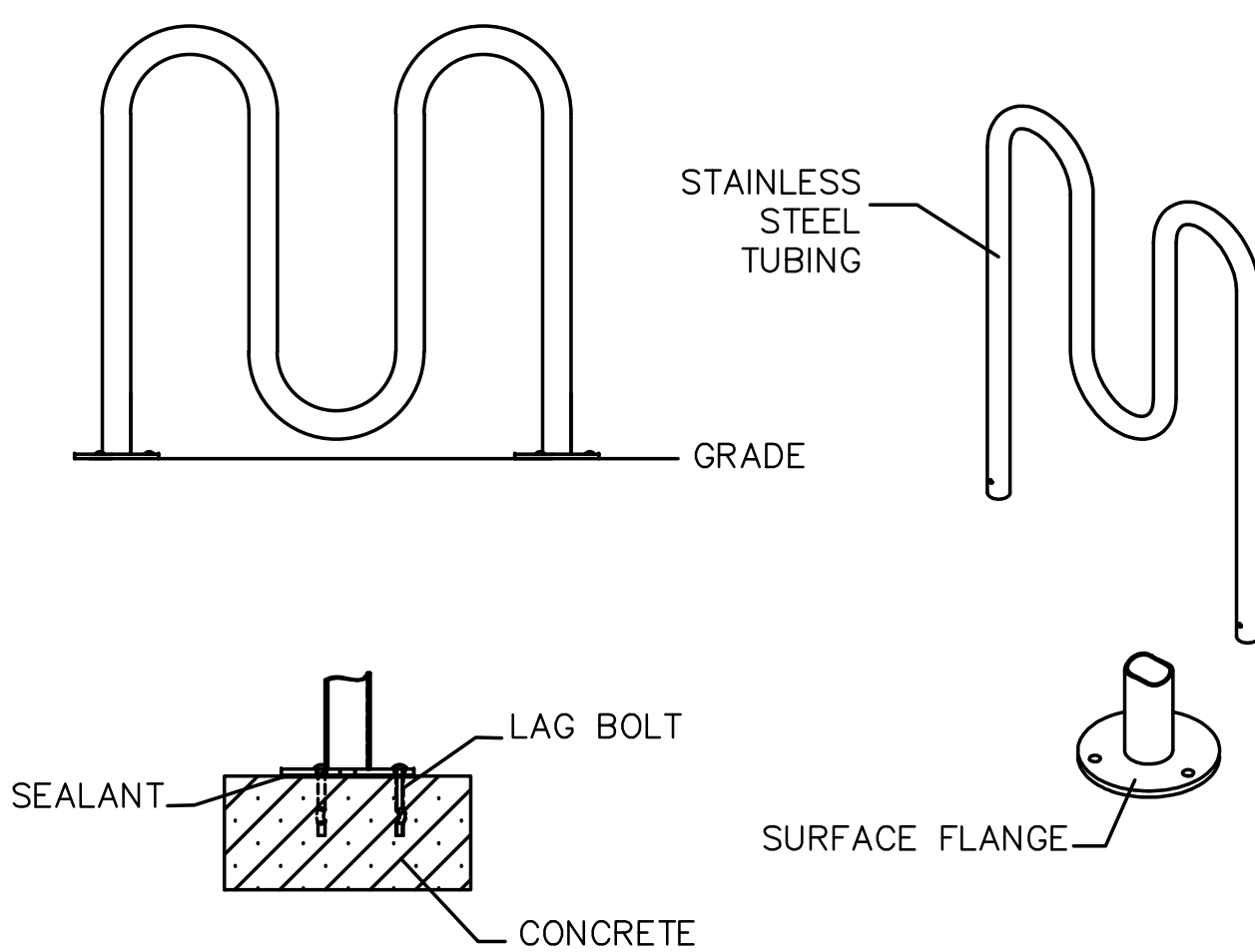
BUMP OUT DETAIL



RADIAL GRANITE CURB DRIVEWAY RETURN - 3' RADIUS



SEE GRADE CHANGE AT ROADWAY INTERFACE



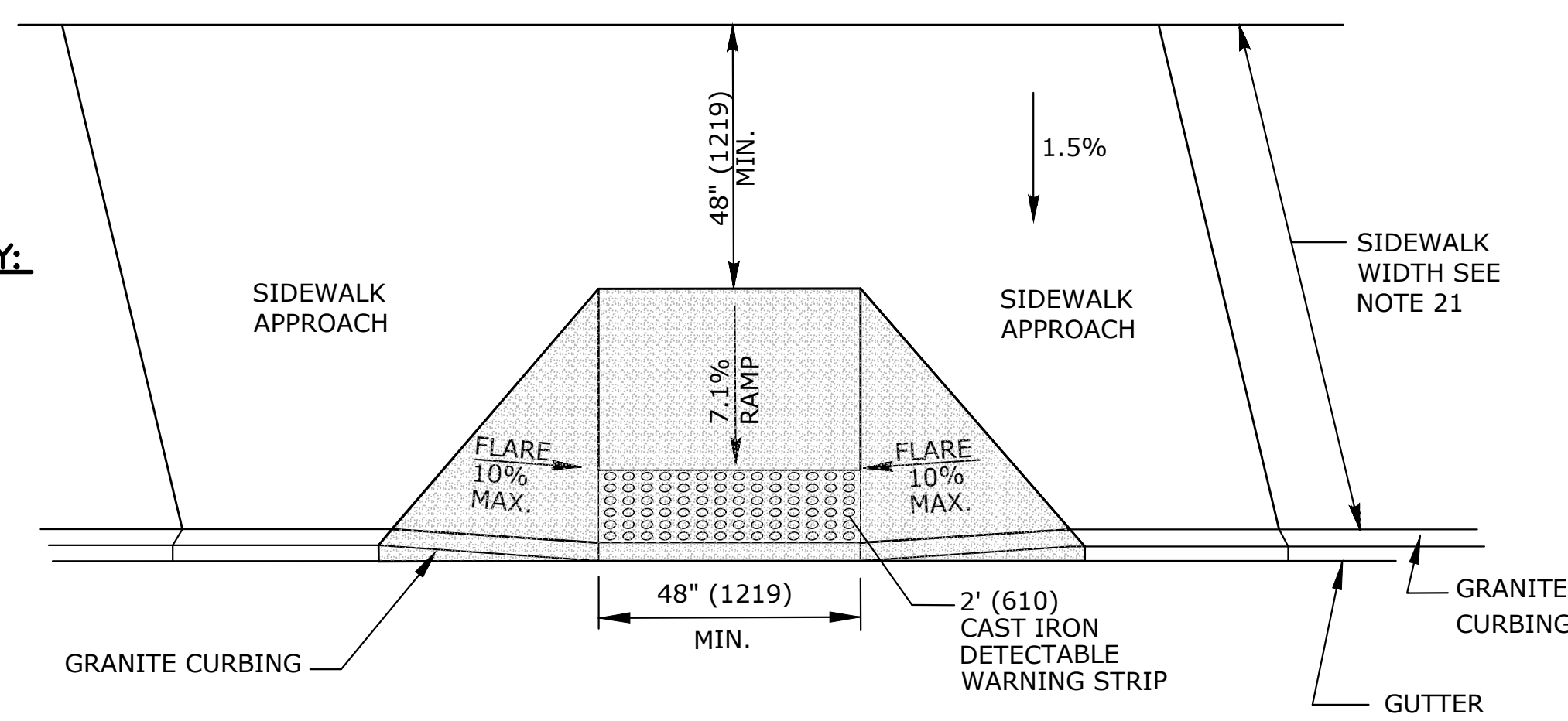
BICYCLE RACK

NOTES:

1. INSTALL BIKE RACKS ACCORDING TO MANUFACTURER'S SPECIFICATIONS
2. SEE SITE PLAN FOR LOCATION OR CONSULT OWNER.

3 LOOP - 5 BIKE RACK AS MANUFACTURED BY:

1. RELIANCE FOUNDRY
UNIT 2017, 6450 - 148 STREET, SURREY BC
V3S 7G7, CANADA 1-877-789-3245
INFO@RELIANCE-FOUNDRY.COM
WWW.RELIANCE-FOUNDRY.COM
MODEL: R-8239-FL-SS
2. AAA RIBBON BIKE RACK CO.
BRANDIR INTERNATIONAL, INC.
521 FIFTH AVE, 17TH FLOOR
NEW YORK, NY 10175 USA 800-849-3488
RIBBONRACK.COM
MODEL: RB 05-S-S
3. OR APPROVED EQUAL

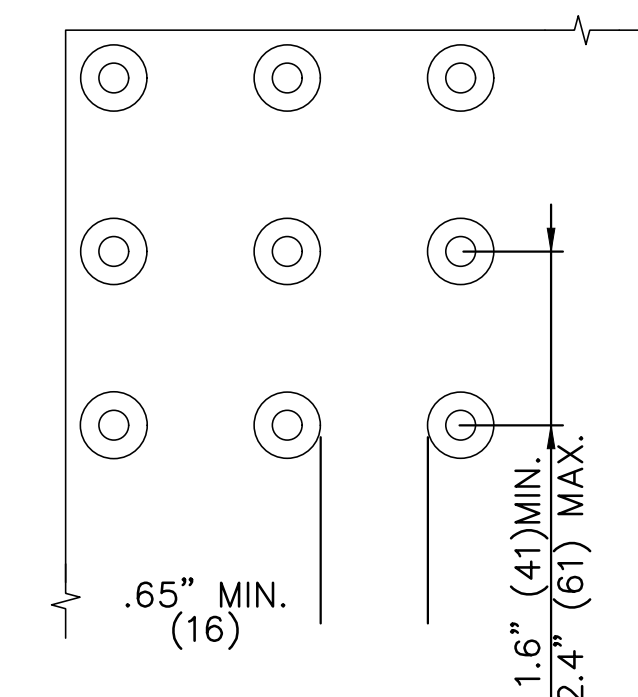


PERPENDICULAR SIDEWALK RAMP

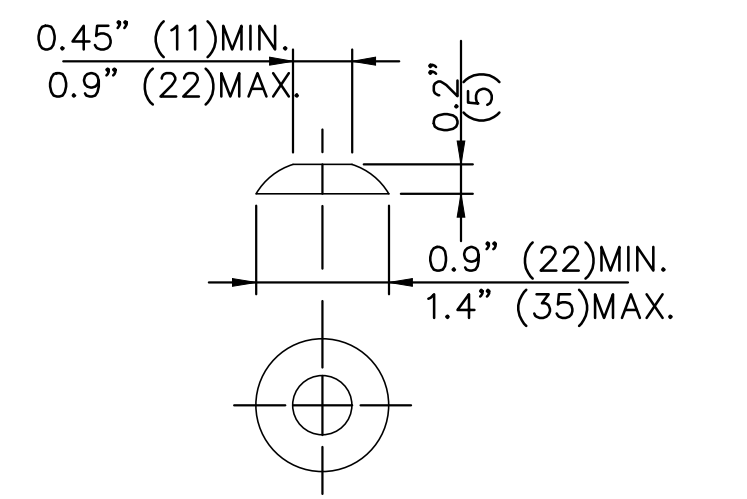
W/48" (1219) MIN. BY PASS LANDING (TYPE 2)

NOTES:

1. RAMPED MEDIANS SHALL HAVE A CURB RAMP AT EITHER END AND LEVEL LANDING A MINIMUM OF 5' x 5' (1.5m x 1.5m) IN BETWEEN. CUT-THROUGH MEDIANS SHALL BE A MINIMUM OF 6' (1.8m) LONG AND 5' (1.5m) WIDE. FOR ALL MEDIANS, CUT-THROUGH OR RAMPED, A 2' (610) STRIP OF DETECTABLE WARNINGS SHALL BE INSTALLED AT THE ENTRANCE AND EXIT.
2. SEE GENERAL NOTES ON ABOVE.



DOMES SPACING



DOMES SECTION

STANDARD DOME ON DETECTABLE WARNING TILES

**BROOKFIELD STREETSCAPE PHASE II
ROUTE 202 (FEDERAL ROAD)
BROOKFIELD, CONNECTICUT**

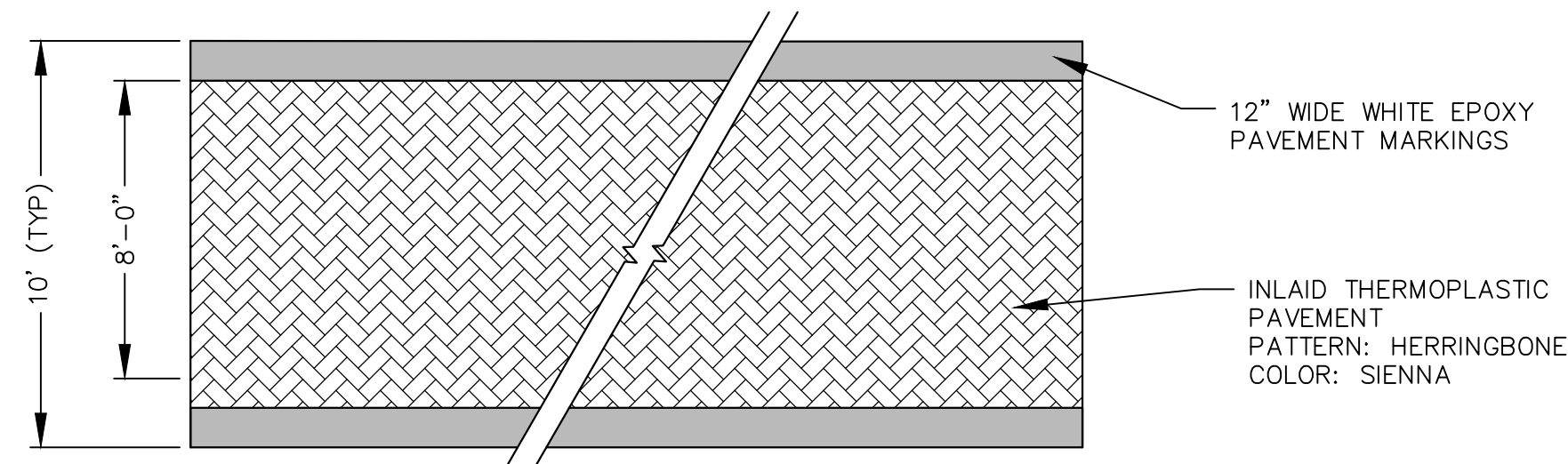
FREEMAN COMPANIES
DBE | DAS | MBE | GNASDC CERTIFIED
CIVIL | GEOTECHNICAL | SURVEY | ENVIRONMENTAL
FREEMAN COMPANIES, LLC
36 JOHN STREET
HARTFORD, CT 06106
WWW.FREEMANCO.COM
860.251.9500
TOLL FREE (800)604-5141
FAX (860)251-7151
ELEVATE YOUR EXPECTATIONS

PREPARED FOR
TOWN OF BROOKFIELD
100 POCONO ROAD
BROOKFIELD,
CONNECTICUT 06804
OWNER FOR
TOWN OF BROOKFIELD
100 POCONO ROAD
BROOKFIELD,
CONNECTICUT 06804

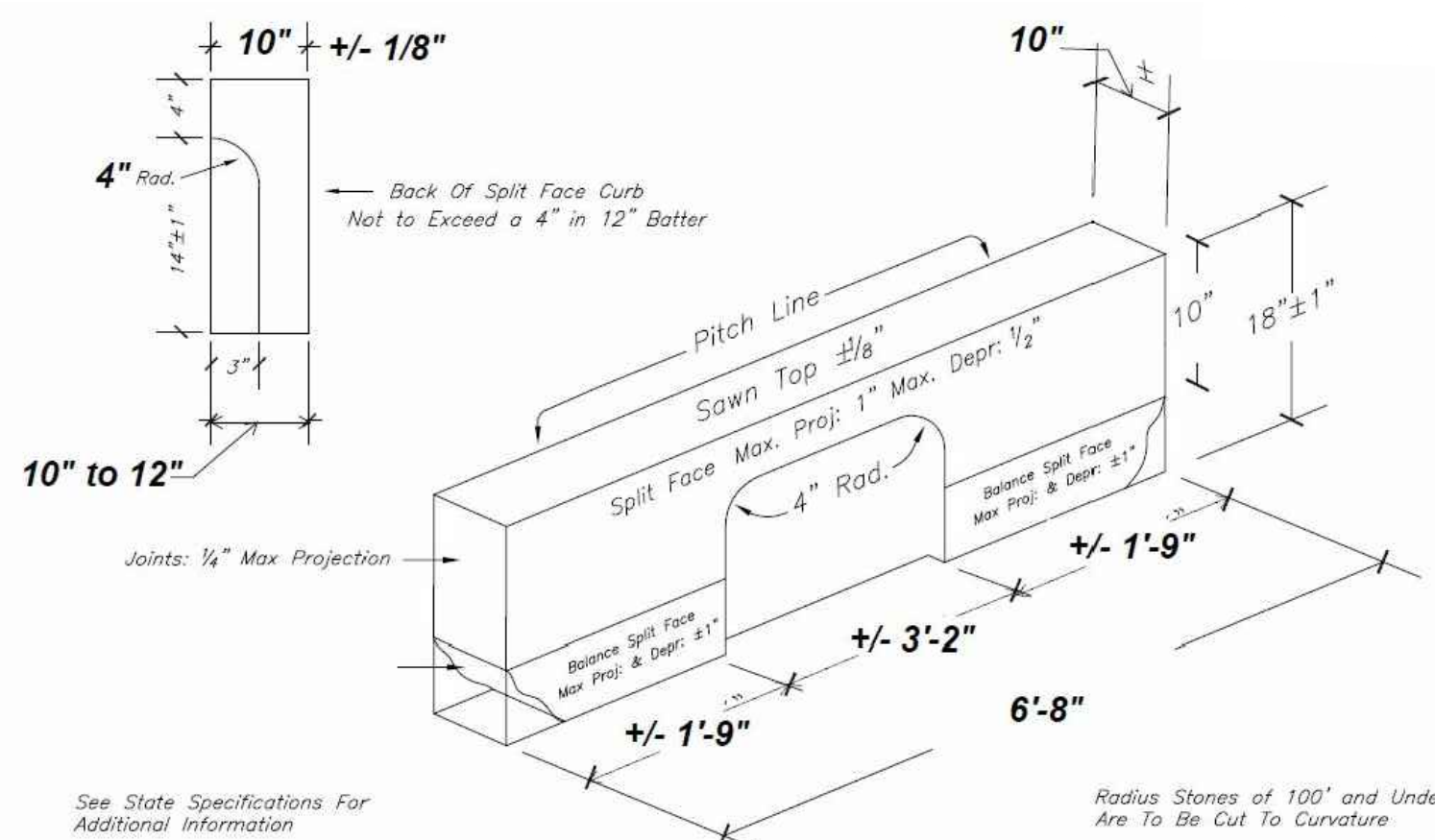
11/13/2017, 10:10 AM NO. 23422

DESIGNED:	YL	
DRAFTED:	PT	
CHECKED:	RG	
APPROVED:		
SCALE:	AS NOTED	
PROJECT NO.:	2017-0605	
DATE:	06/13/2018	
FILE:	HW_MST_2017_0605_MDS-1	
NO.	DATE	DESCRIPTION
REVISIONS		

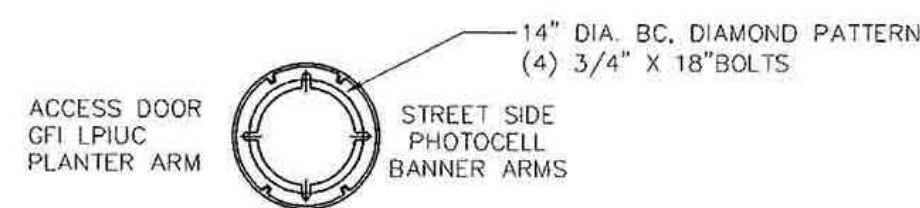
TITLE:
**MISCELLANEOUS
DETAILS**
SHEET NUMBER:
MDS-1



INLAID THERMOPLASTIC CROSSWALK



GRANITE CURB CATCH BASIN INLET



FDRB OUTPUT SETTINGS 100% OR ADVISE

LED LIGHT SOURCE

CLEAR SEEDED ACRYLIC LENS

DECORATIVE FROSTED CHIMNEY WITH SOLID BRASS HOLDER

DRIVER COMPARTMENT

PHOTOCELL

LOW PROFILE DUPLEX GF1 RECEPTACLE WITH IN USE COVER

THE 7/8" DIA BANNER ARMS ARE 37" APART FROM THE TOP OF THE UPPER ARM, TO THE BOTTOM OF THE LOWER ARM.

BANNER ARMS SET FOR 18" X 36" BANNERS

BANNERS BY OTHERS

SINGLE STEPPED PLANTER ARM

5"-4" DIA. TAPERED POLE

188 WALL THICKNESS

6063-T6 STRUCTURAL GRADE ALUMINUM

POLE WELDED FOR SINGLE UNIT CONSTRUCTION

NOTE:

- SEE SPECIFICATIONS FOR ADDITIONAL LIGHT REQUIREMENTS
- SEE LANDSCAPE AND LIGHTING PLAN FOR LIGHT LOCATIONS

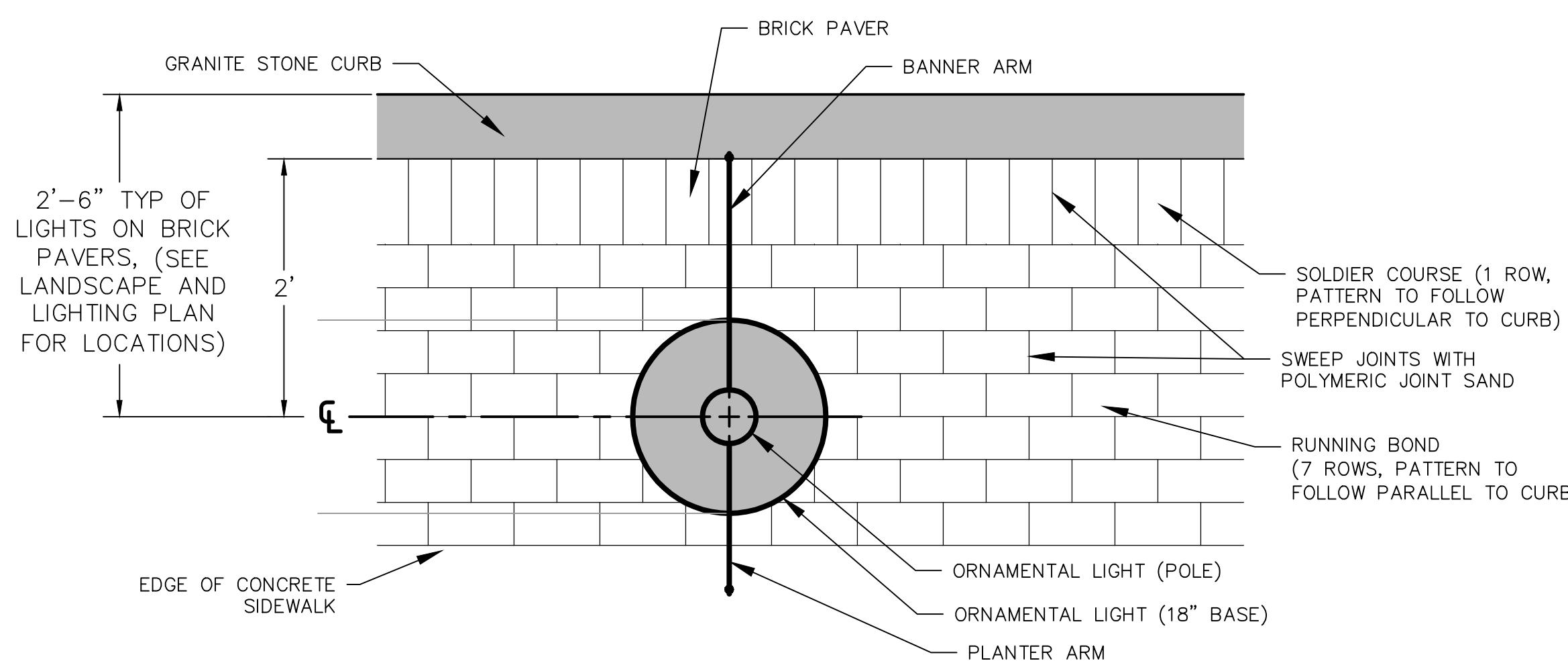
ACCESS DOOR

18" DIA. BASE, 1" FLOOR THICKNESS

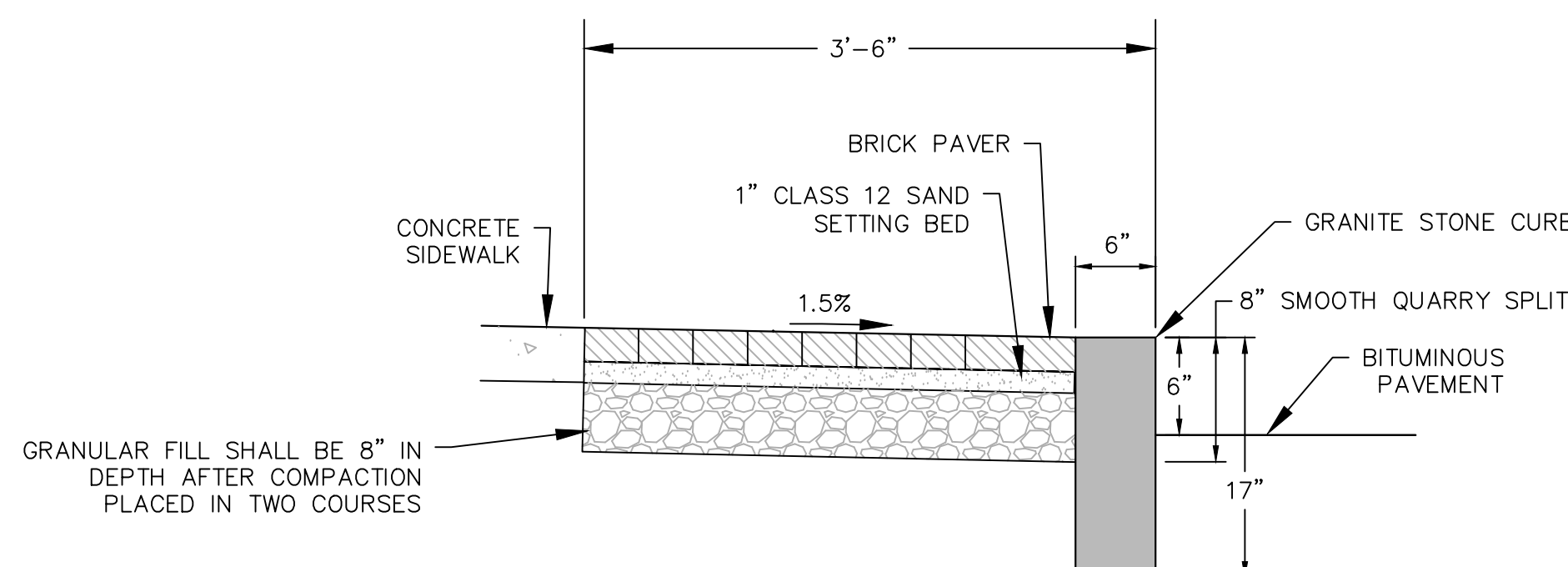
4 ANCHOR BOLTS

SEE LIGHT POLE BASE DETAIL IN THIS PAGE

ORNAMENTAL LIGHT

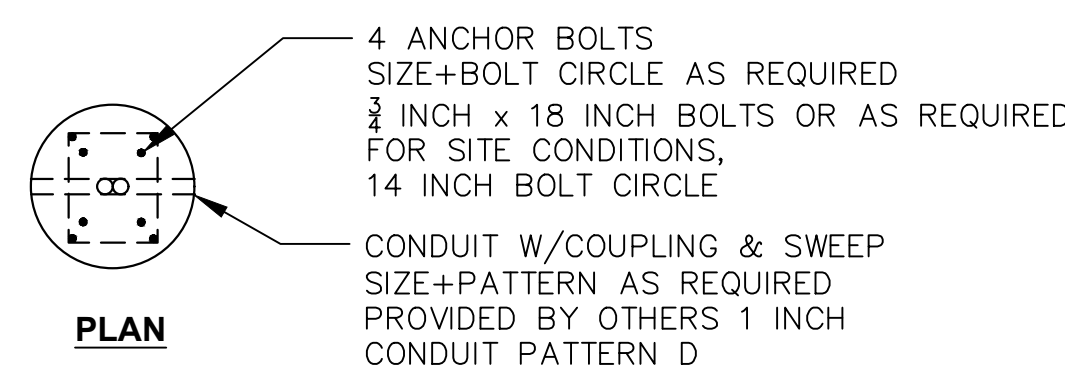


PLAN

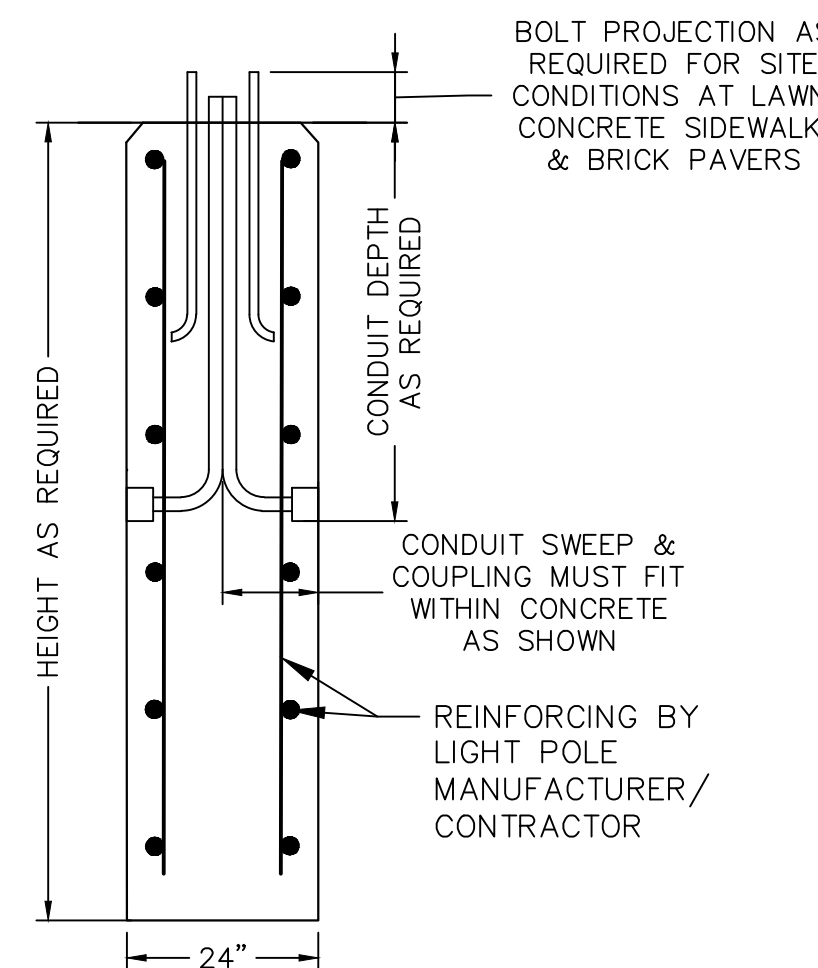


SECTION

BRICK PAVERS



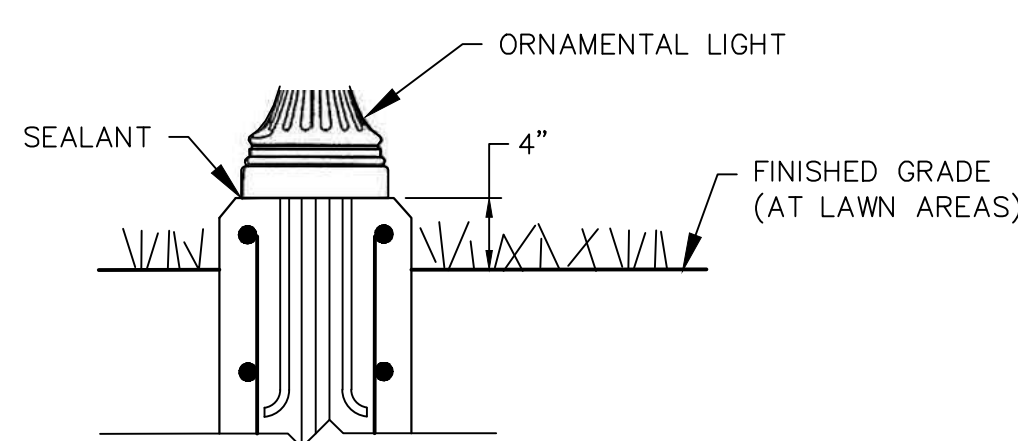
PLAN



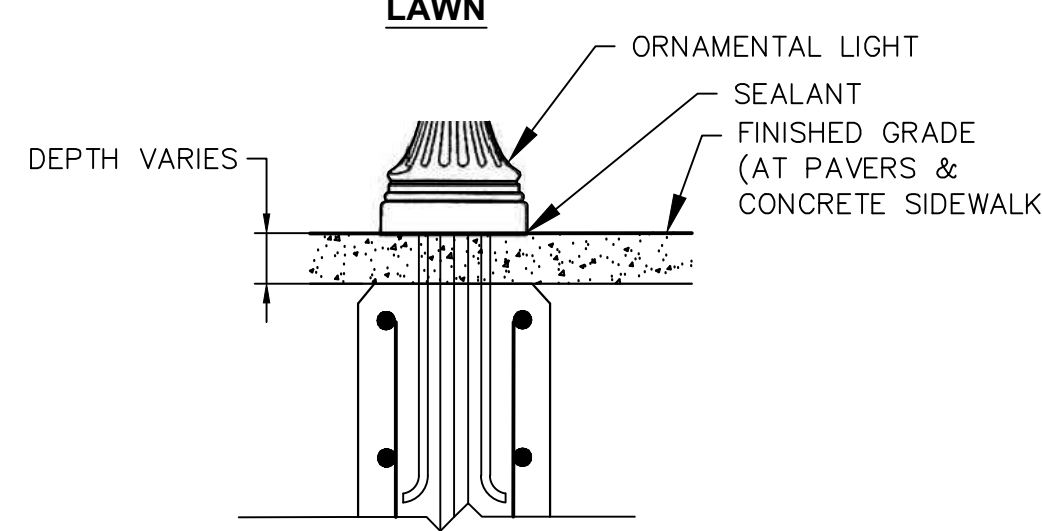
TYP SECTION

NOTE: FOUNDATION DESIGN TO BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH CTDOT STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION, FORM 817, DATED 2016; SUPPLEMENTAL SPECIFICATIONS, DATED JANUARY 2018; AND SPECIAL PROVISIONS.

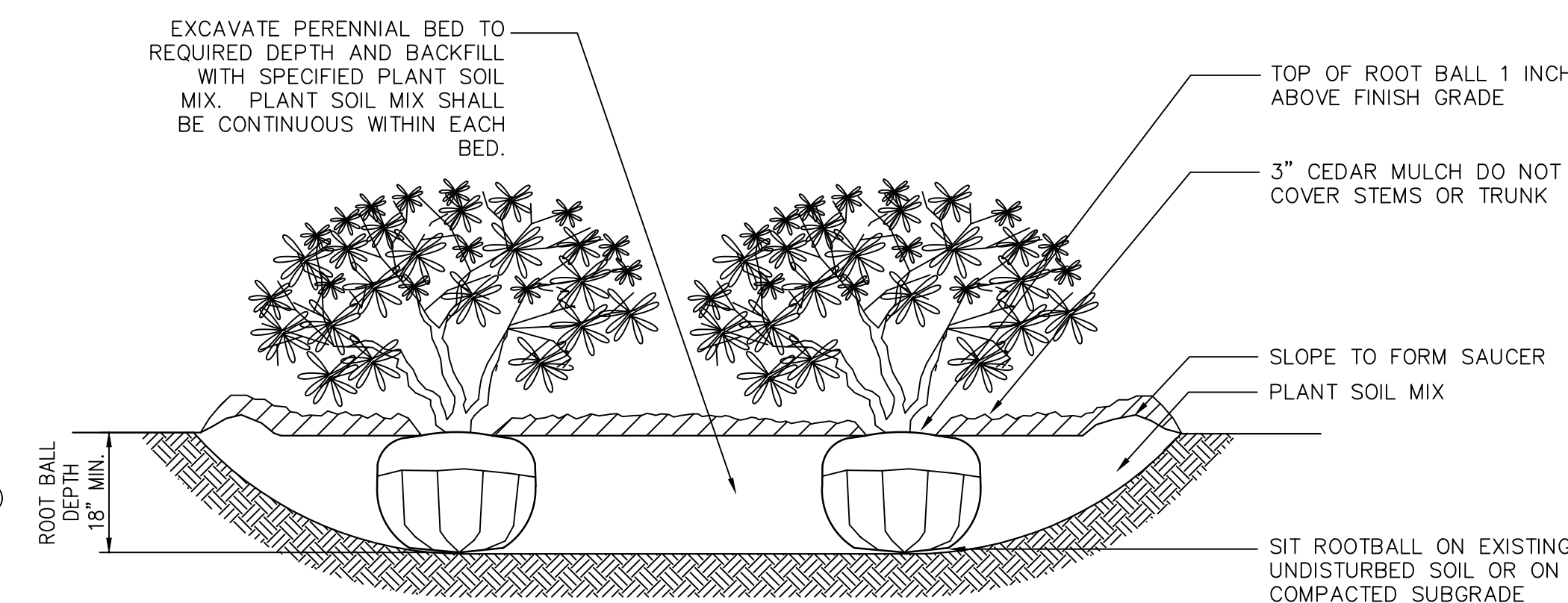
LIGHT POLE BASE



SECTION AT LAWN



SECTION AT PAVERS OR CONCRETE SIDEWALK

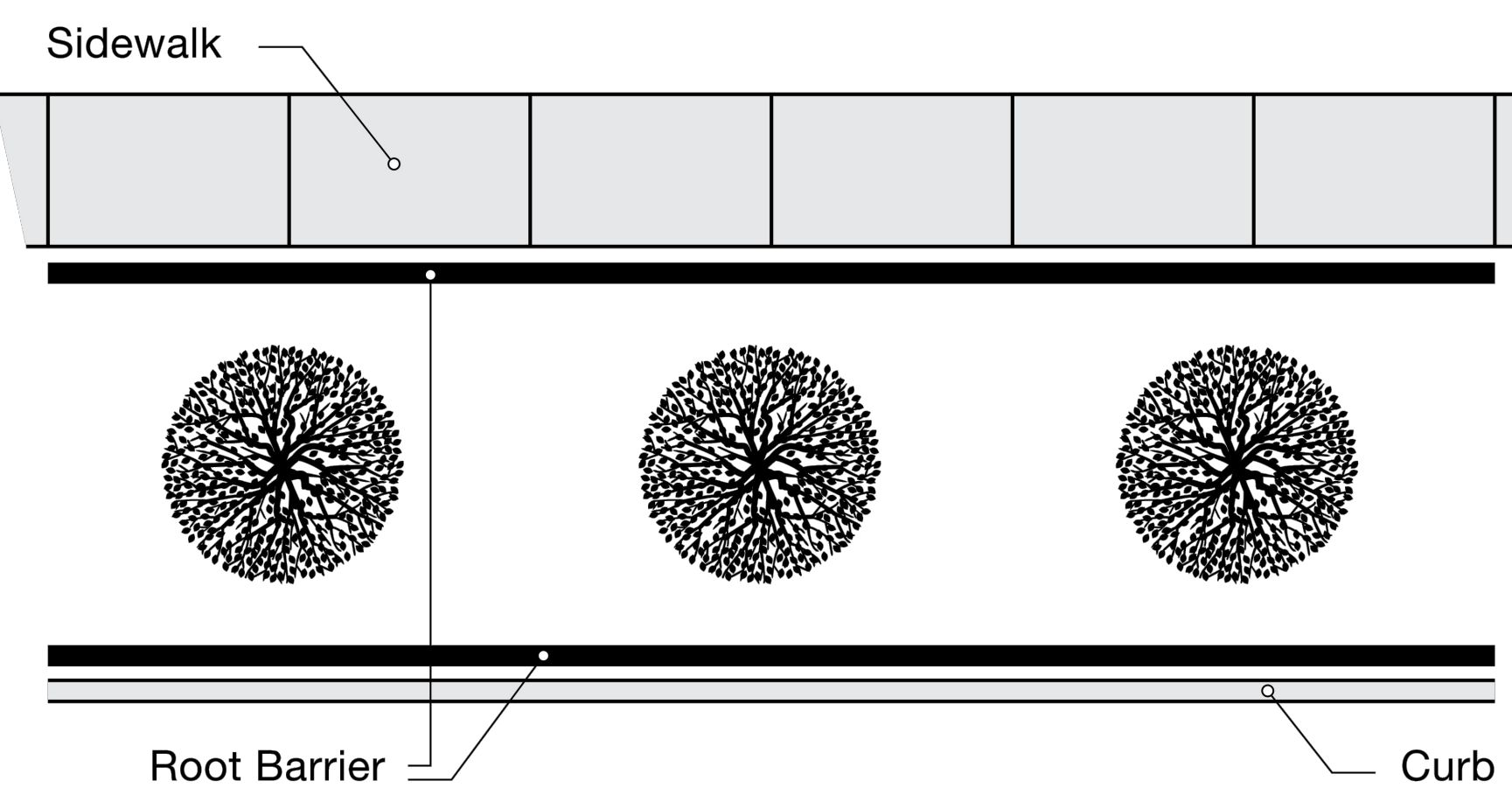
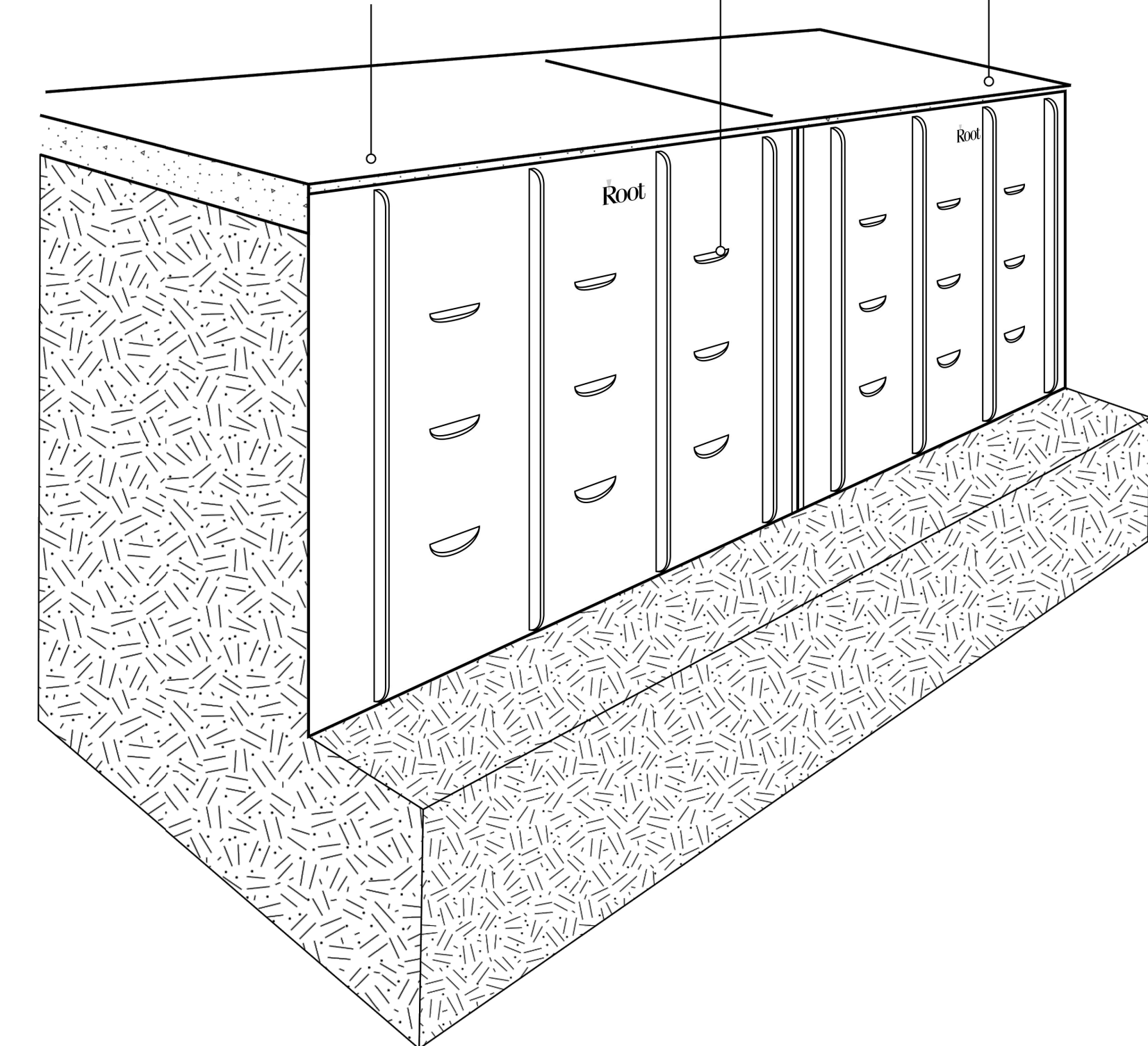


NOTE:

- LOOSEN ROOTS AT THE OUTER EDGE OF ROOTBALL OF CONTAINER GROWN PERENNIALS.

PLANTING BED

Top of Root Barrier must be at least 1/2" (13mm) above grade



ROOT BARRIER

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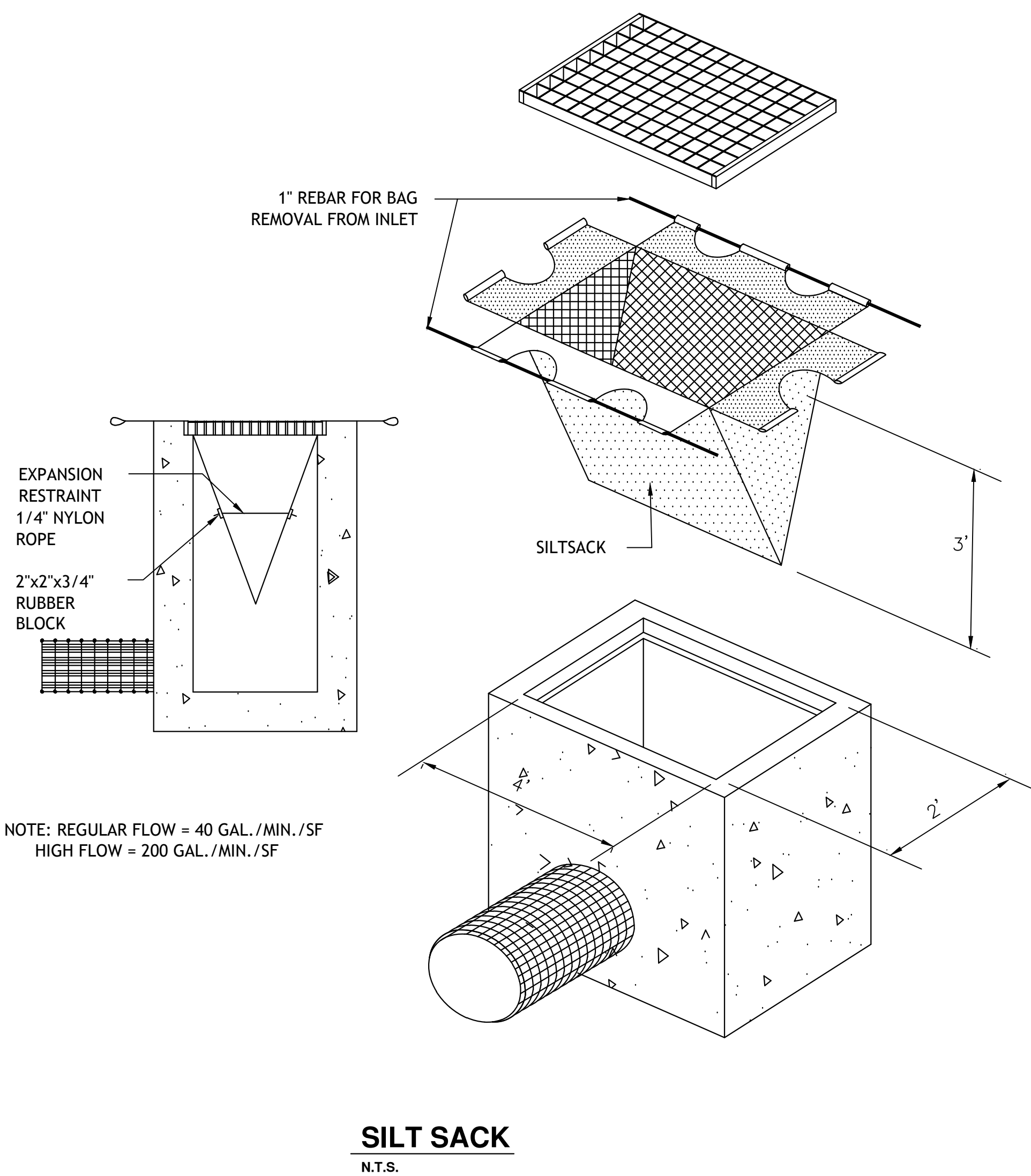
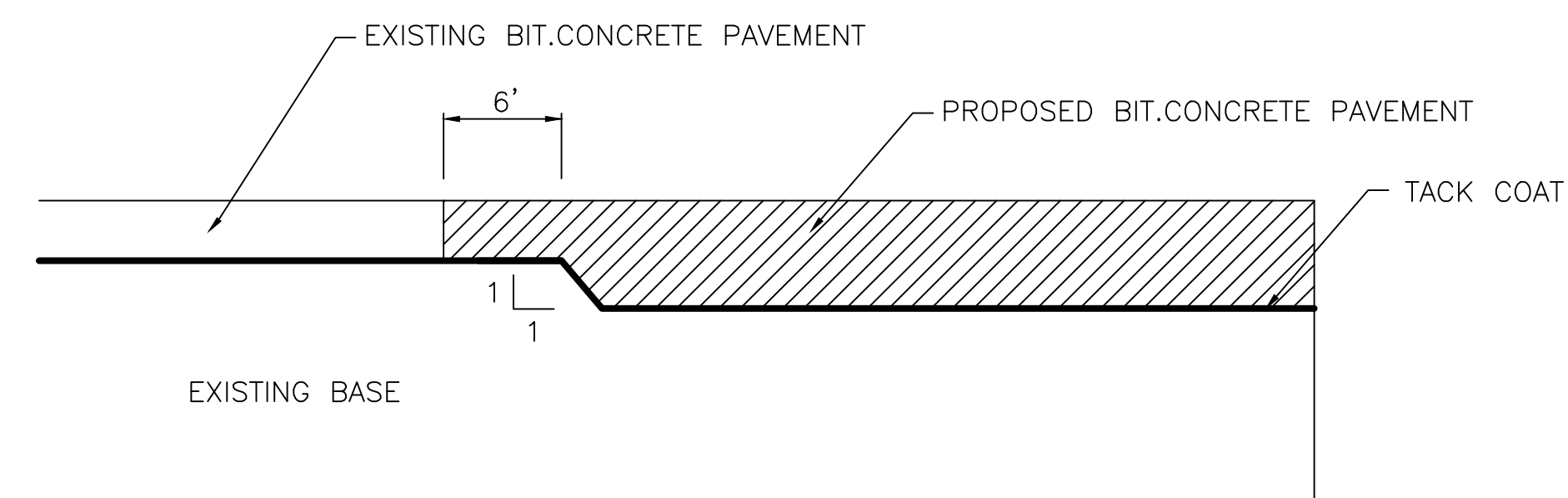
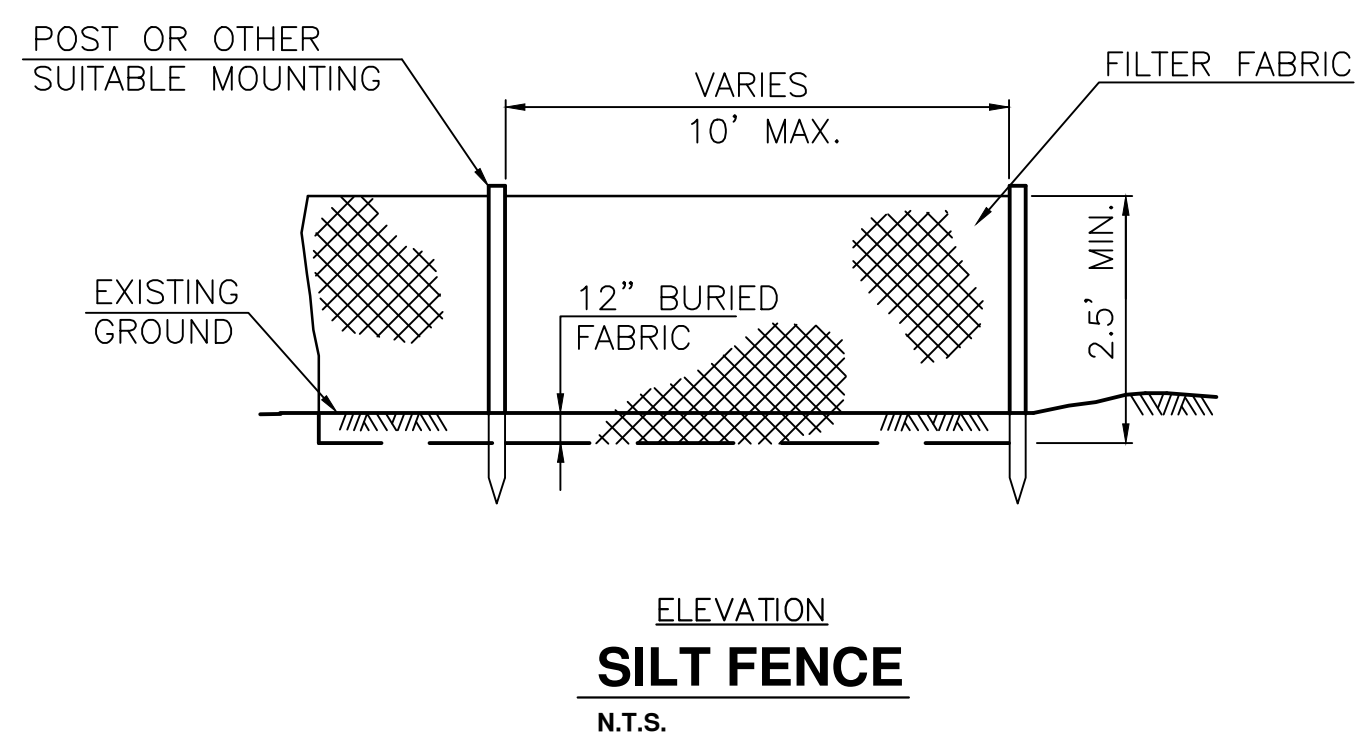
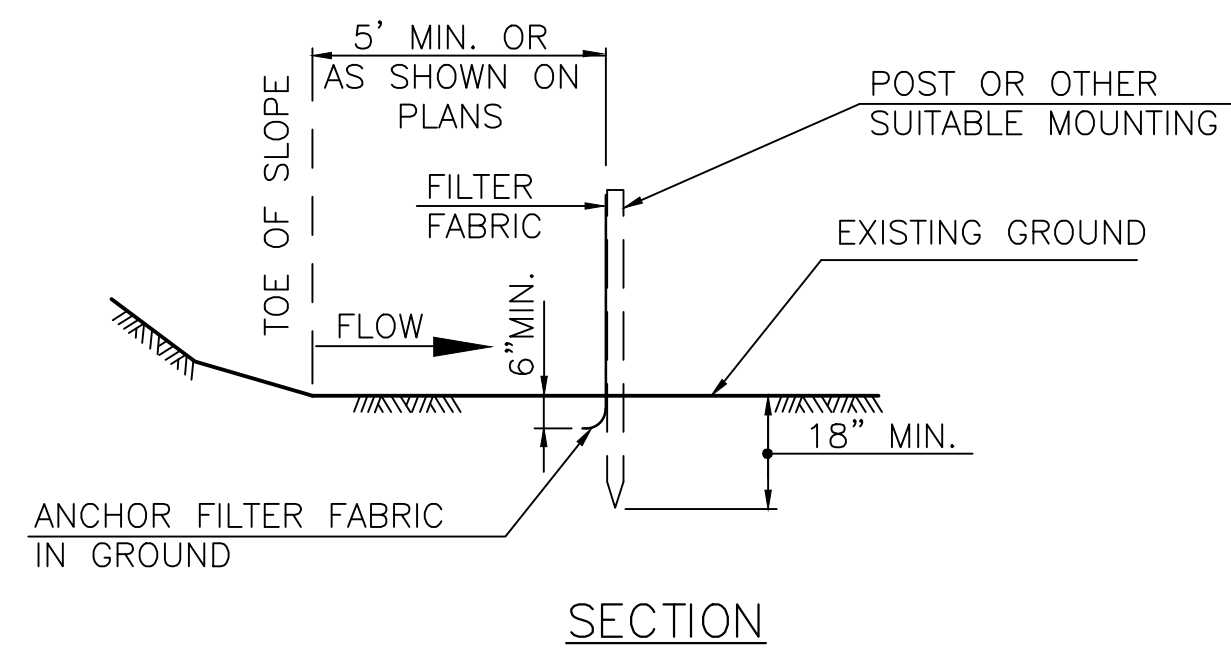
PREPARED FOR
 TOWN OF BROOKFIELD
 100 POCONO ROAD
 BROOKFIELD,
 CONNECTICUT 06804
 OWNER FOR
 TOWN OF BROOKFIELD
 100 POCONO ROAD
 BROOKFIELD,
 CONNECTICUT 06804

NO. DATE DESCRIPTION

**BROOKFIELD STREETSCAPE PHASE II
 ROUTE 202 (FEDERAL ROAD)
 BROOKFIELD, CONNECTICUT**

DESIGNED:	YL
DRAFTED:	KM
CHECKED:	RG
APPROVED:	
SCALE:	NOT TO SCALE
PROJECT NO.:	2017-0605
DATE:	06/26/2018
FILE:	HWL_MST_2017_0605_MDS-2

TITLE:	MISCELLANEOUS DETAILS
SHEET NUMBER:	MDS-2



BROOKFIELD STREETScape PHASE II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT

Freeman Companies, LLC - R:\2017\2017-0605 Brookfield Streetscape Phase 2\DWG\HW_MST_2017_0605_MDS-2.dwg Jan 30, 2019 3:38pm Plotted By: plikhuri

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PREPARED FOR
TOWN OF BROOKFIELD
100 POCONO ROAD
BROOKFIELD,
CONNECTICUT 06804

OWNER FOR
TOWN OF BROOKFIELD
100 POCONO ROAD
BROOKFIELD,
CONNECTICUT 06804

10/15/2018
NO. 23422

10/15/2018
NO. 23422

10/15/2018
NO. 23422

10/15/2018
NO. 23422

10/15/2018
NO. 23422

10/15/2018
NO. 23422

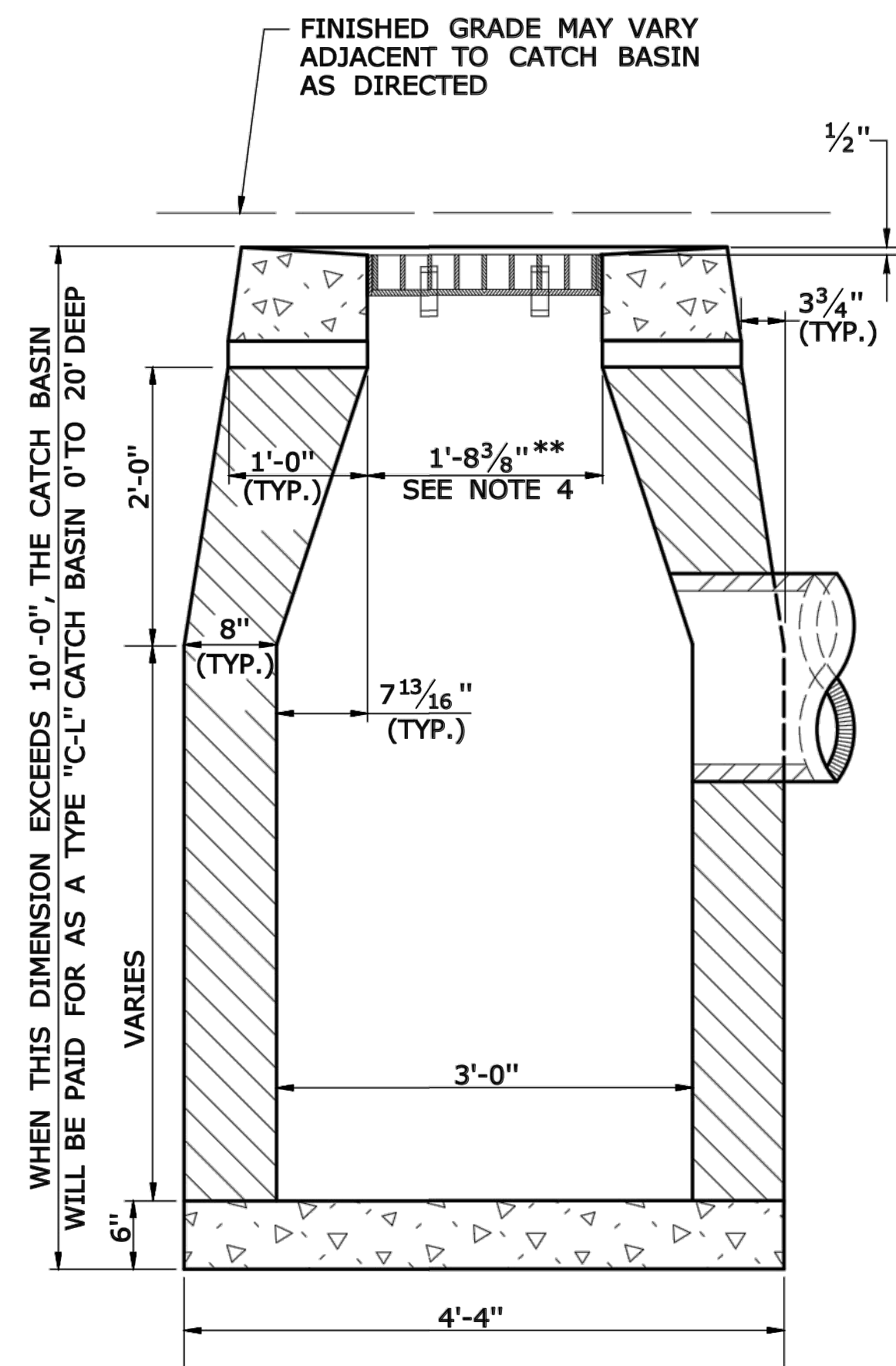
10/15/2018
NO. 23422

10/15/2018
NO. 23422

DESIGNED: YL
DRAFTED: PT
CHECKED: RG
APPROVED:
SCALE: NOT TO SCALE
PROJECT NO.: 2017-0605
DATE: 10/15/2018
FILE: HW_MST_2017_0605_MDS-2

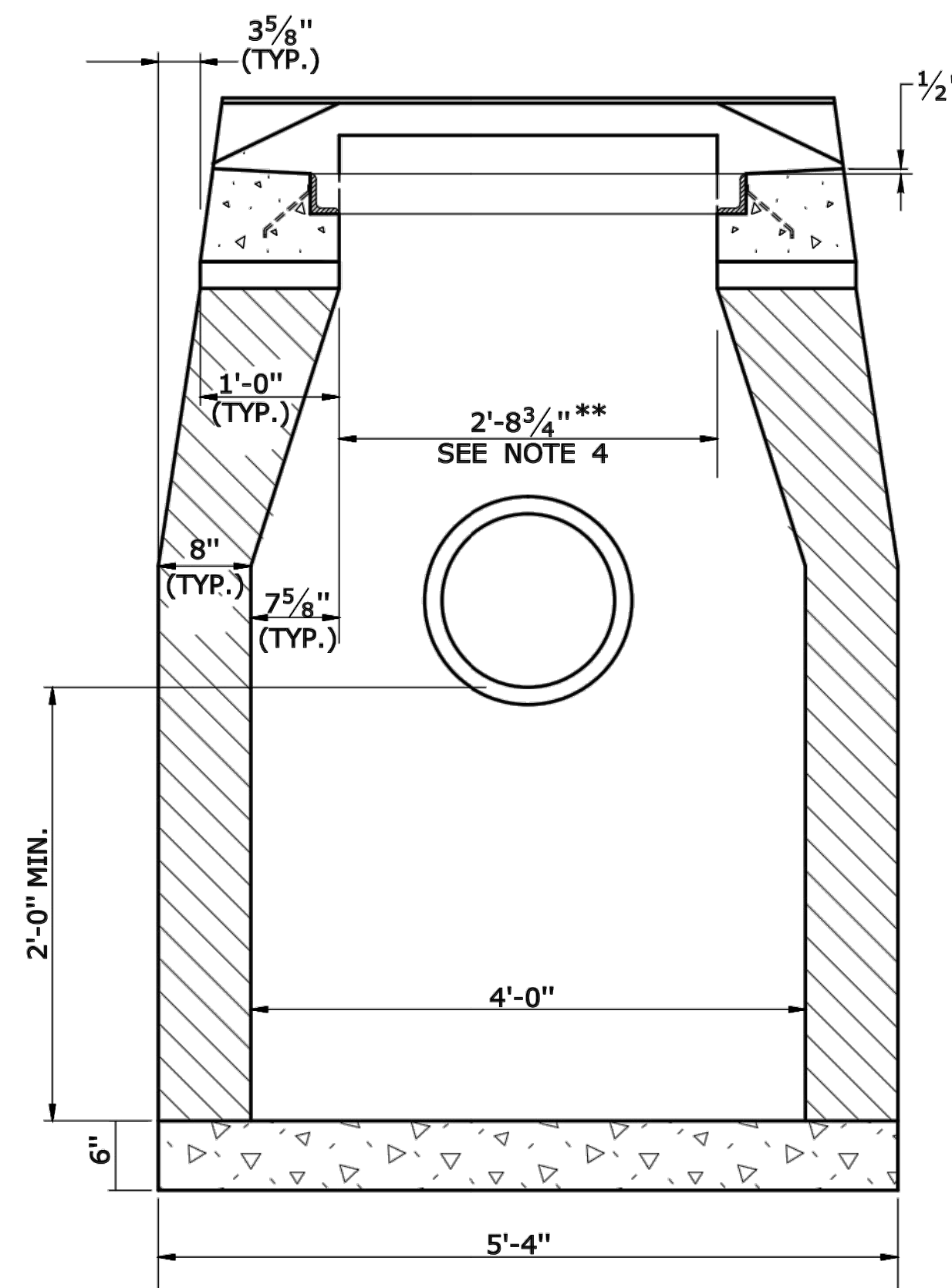
TITLE: MISCELLANEOUS DETAILS
SHEET NUMBER: MDS-3

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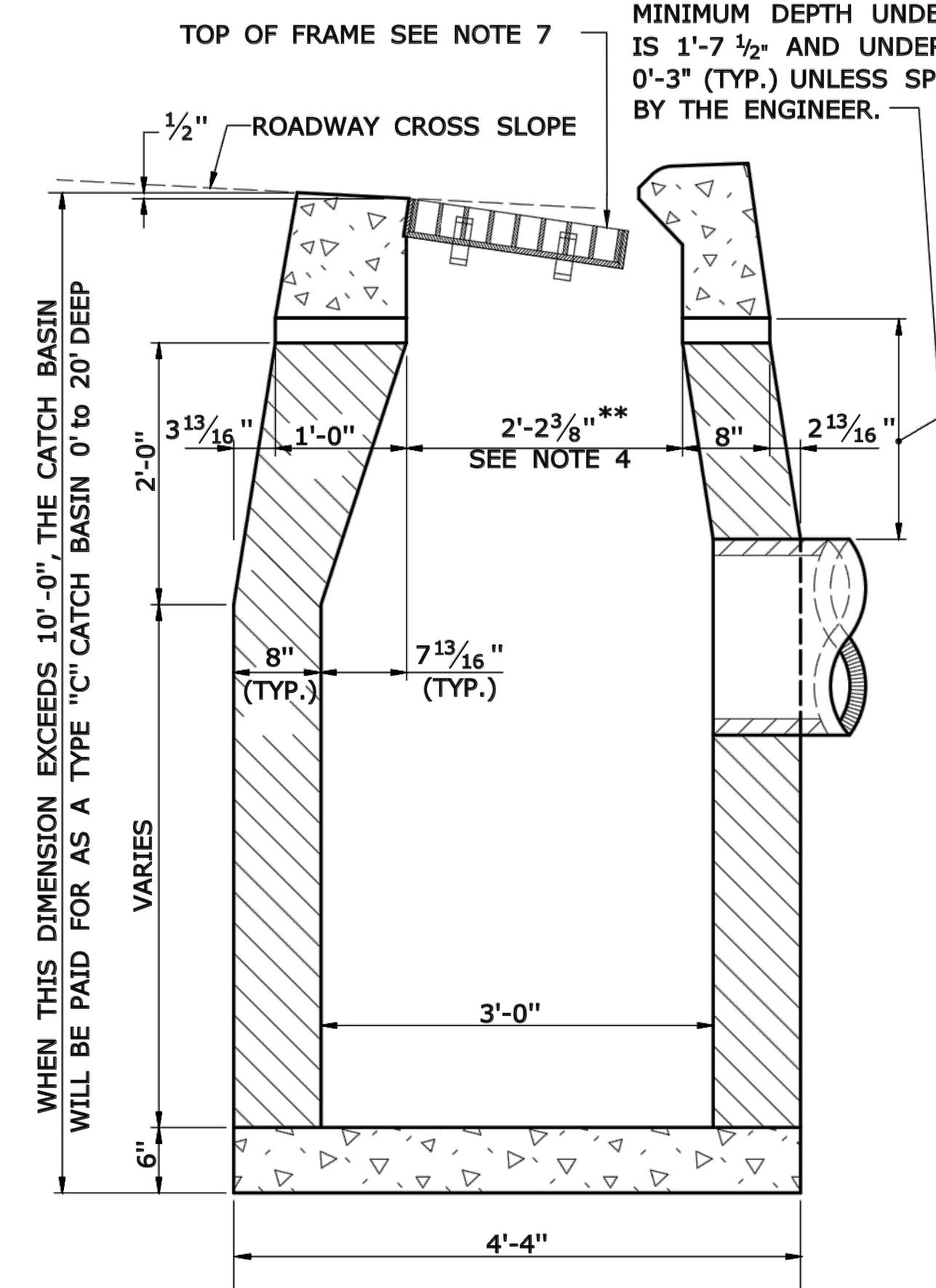
SECTION B

TYPE "C-L" CATCH BASIN



SECTION A

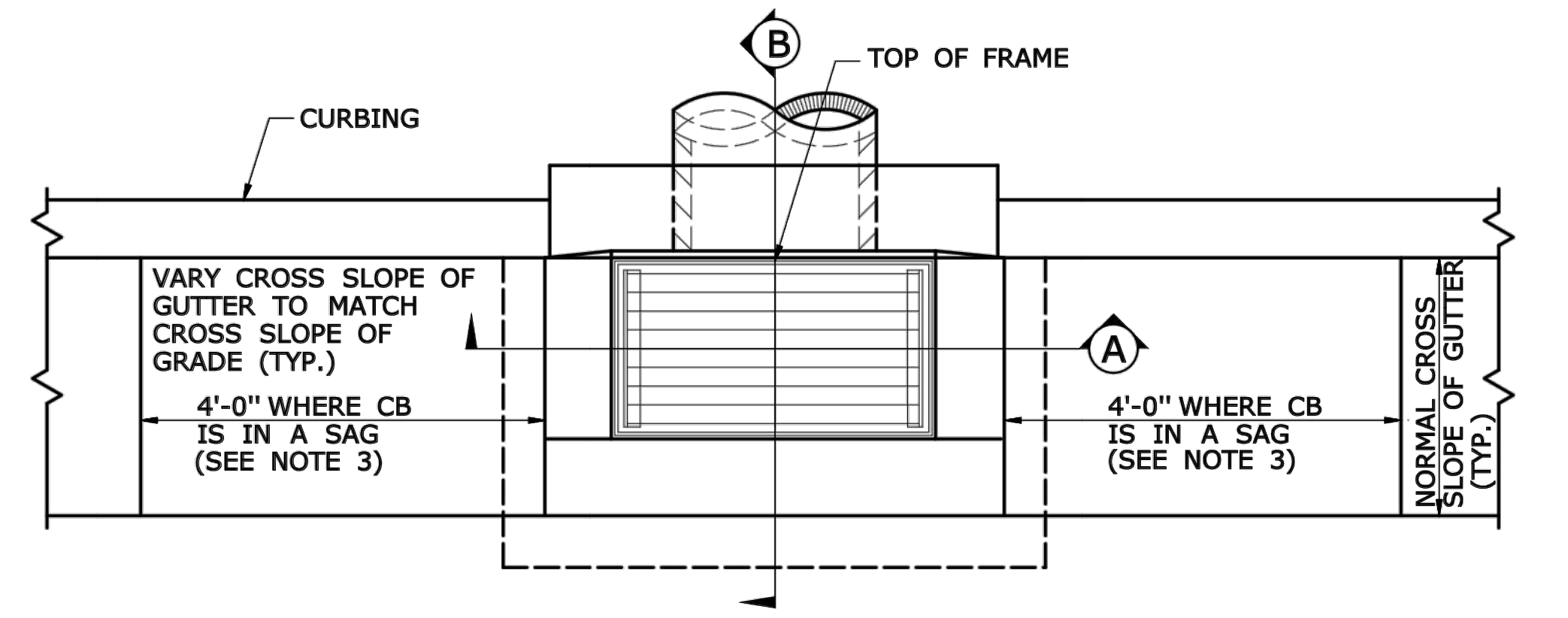
TYPE "C" & "C-L" CATCH BASIN (TYPE "C" TOP SHOWN)



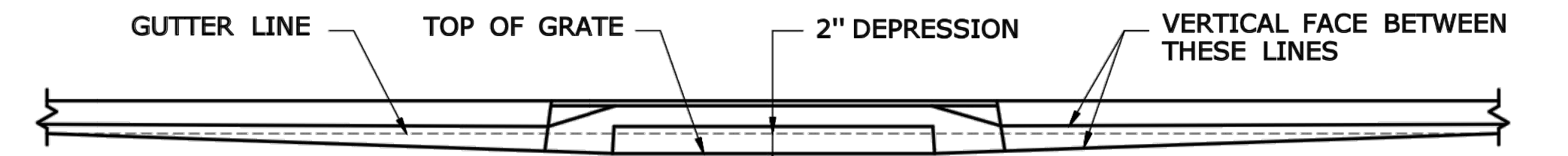
SECTION B

TYPE "C" CATCH BASIN

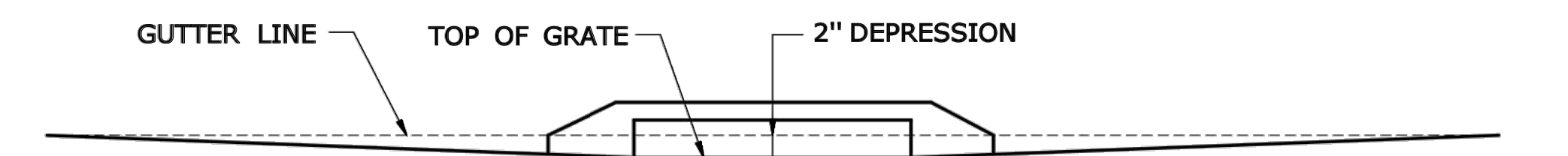
- GENERAL NOTES:**
1. FOR CATCH BASIN TOPS, SEE DRAWING NO. DGS-07.
 2. ALL FACES OF STRUCTURES IN CONTACT WITH CONCRETE PAVEMENT SHALL BE COVERED WITH A LAYER OF TAR PAPER OR APPROVED EQUAL.
 3. USE 6'-0" ON UPGRADE SIDE (SEE PLAN VIEW) OF CONTINUOUS GRADE AND 1'-0" ON DOWNGRADE SIDE OF CONTINUOUS GRADE OR AS DIRECTED BY THE ENGINEER.
 4. IF MASONRY UNITS ARE REQUIRED, THE BASIN SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE DIMENSIONS SHOWN. CORBELLING SHALL BE PERMITTED TO A MAXIMUM OF 3". NO PROJECTION SHALL EXTEND INSIDE THE LIMITS FOR THE CATCH BASIN OPENINGS SHOWN IN THE SECTION VIEWS **.
 5. WALL THICKNESS OF ALL CATCH BASINS OVER 10' DEEP SHALL BE INCREASED TO 12" THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. 12" THICKNESS SHALL START AFTER THE FIRST 10'.
 6. SPACERS CAN BE EITHER CONCRETE MASONRY UNIT OR PRECAST WITH THE REQUIRED REINFORCING (RECOMMENDED BY THE MANUFACTURER) AS NEEDED TO PROVIDE THE PROPER GRADE SHOWN ON THE PLANS.
 7. TOP OF FRAME ELEVATION SHALL BE MEASURED IN THE CENTER OF GRATE AT GUTTER LINE.



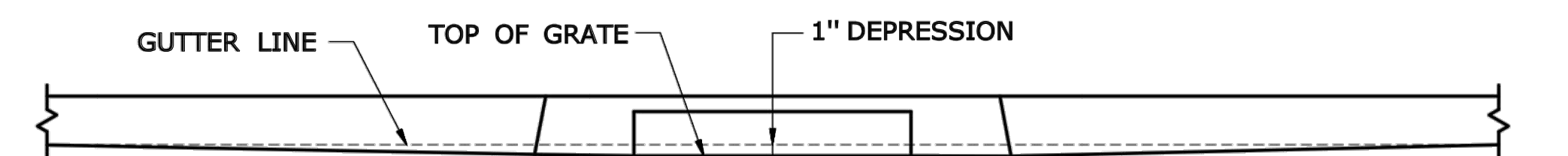
PLAN



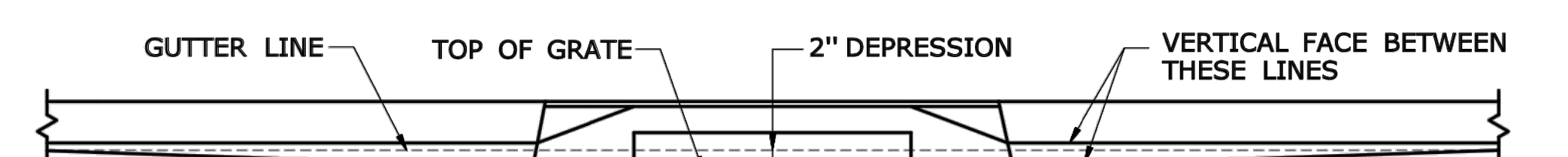
CATCH BASINS IN A LINE WITH 4" CONCRETE PARK CURBING OR 4" BITUMINOUS CONCRETE PARK CURBING



CATCH BASINS WHERE NO CURBING OF ANY TYPE EXISTS OR IS PROPOSED

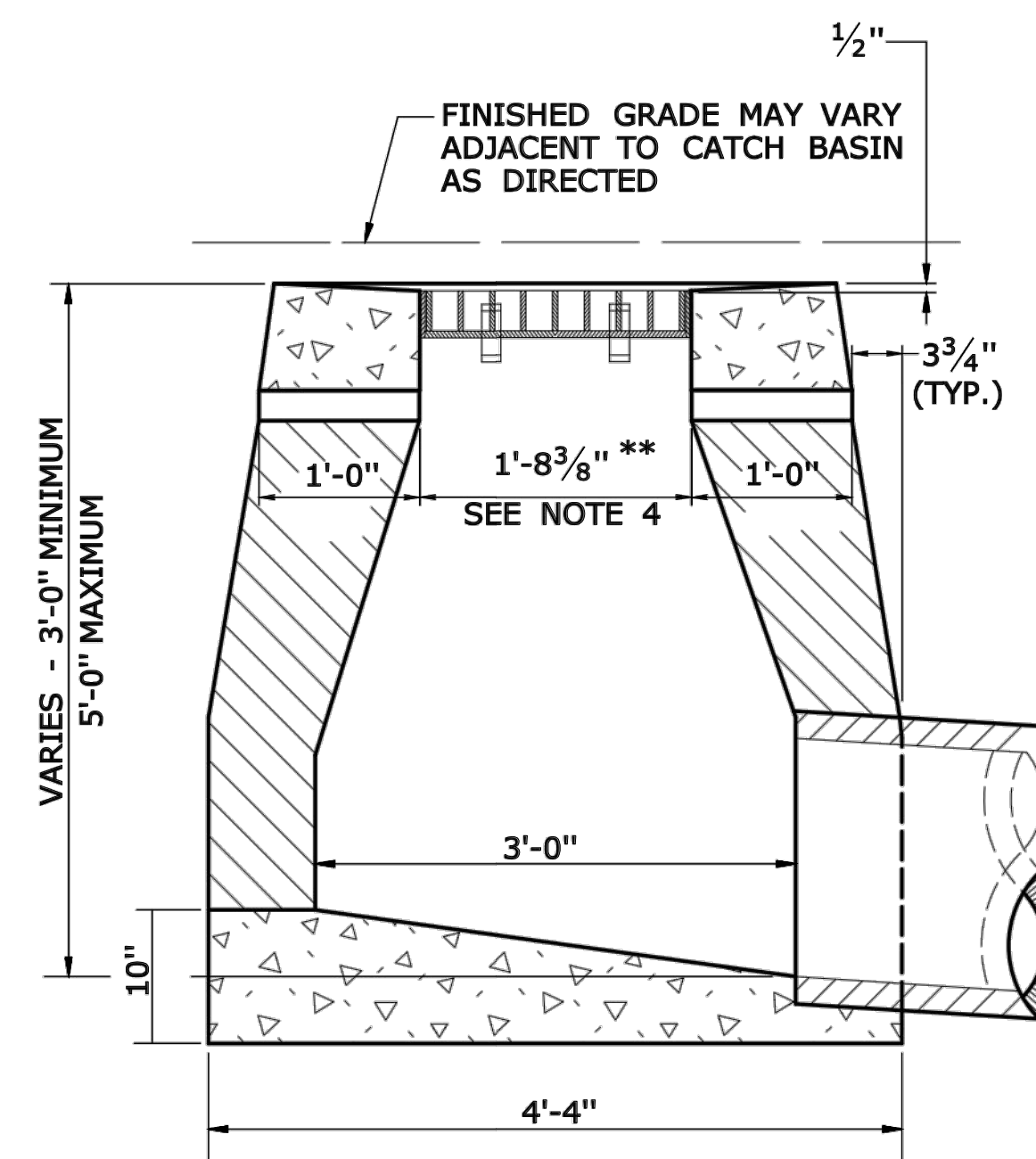


CATCH BASINS IN A LINE WITH 6" CONCRETE CURBING OR 6" STONE CURBING



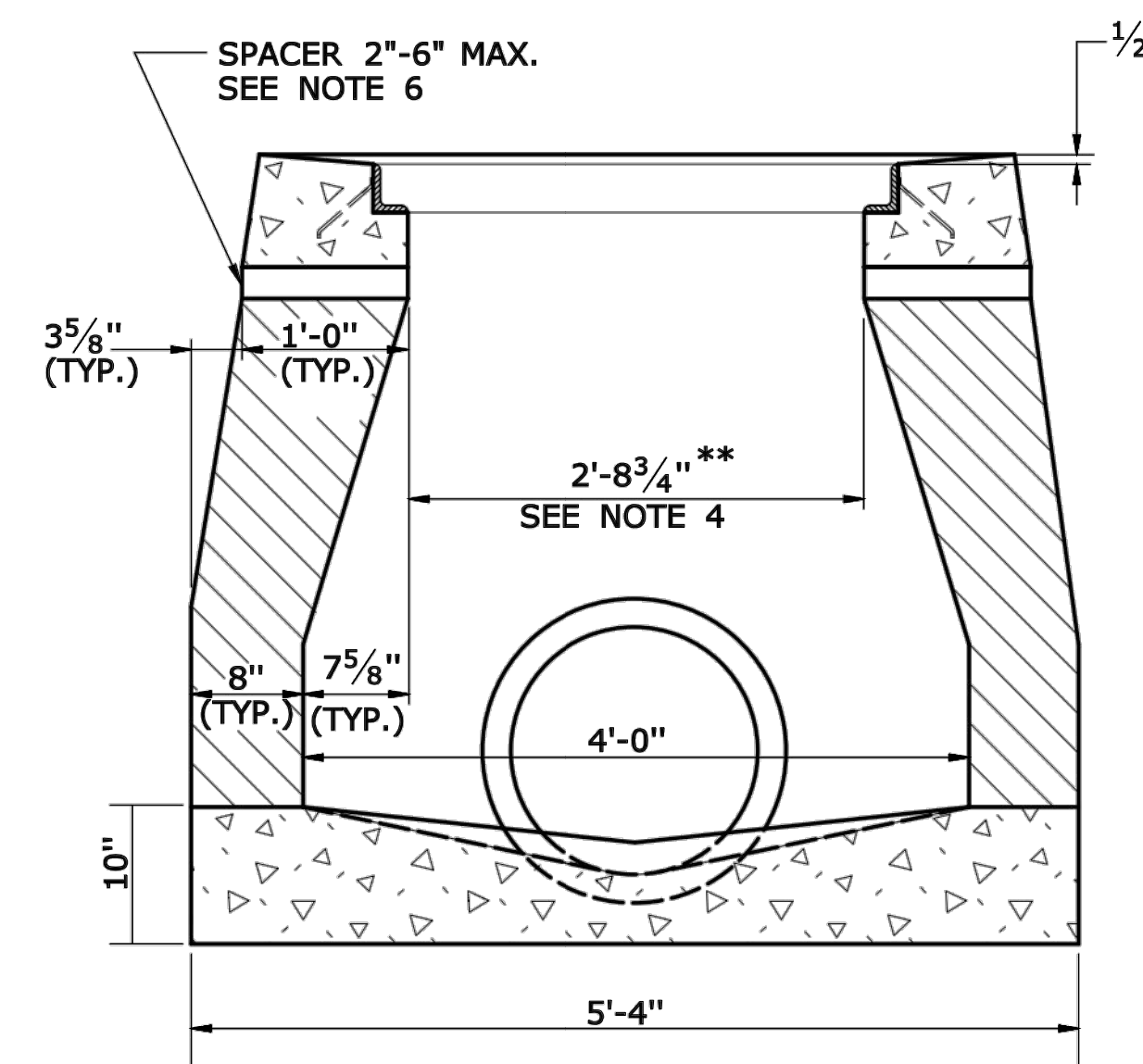
CATCH BASINS IN A LINE WITH 6" BITUMINOUS CONCRETE LIP CURBING (MACHINE FORMED)

DETAILS OF DEPRESSED GUTTER STRIP FOR TYPE "C" CATCH BASIN



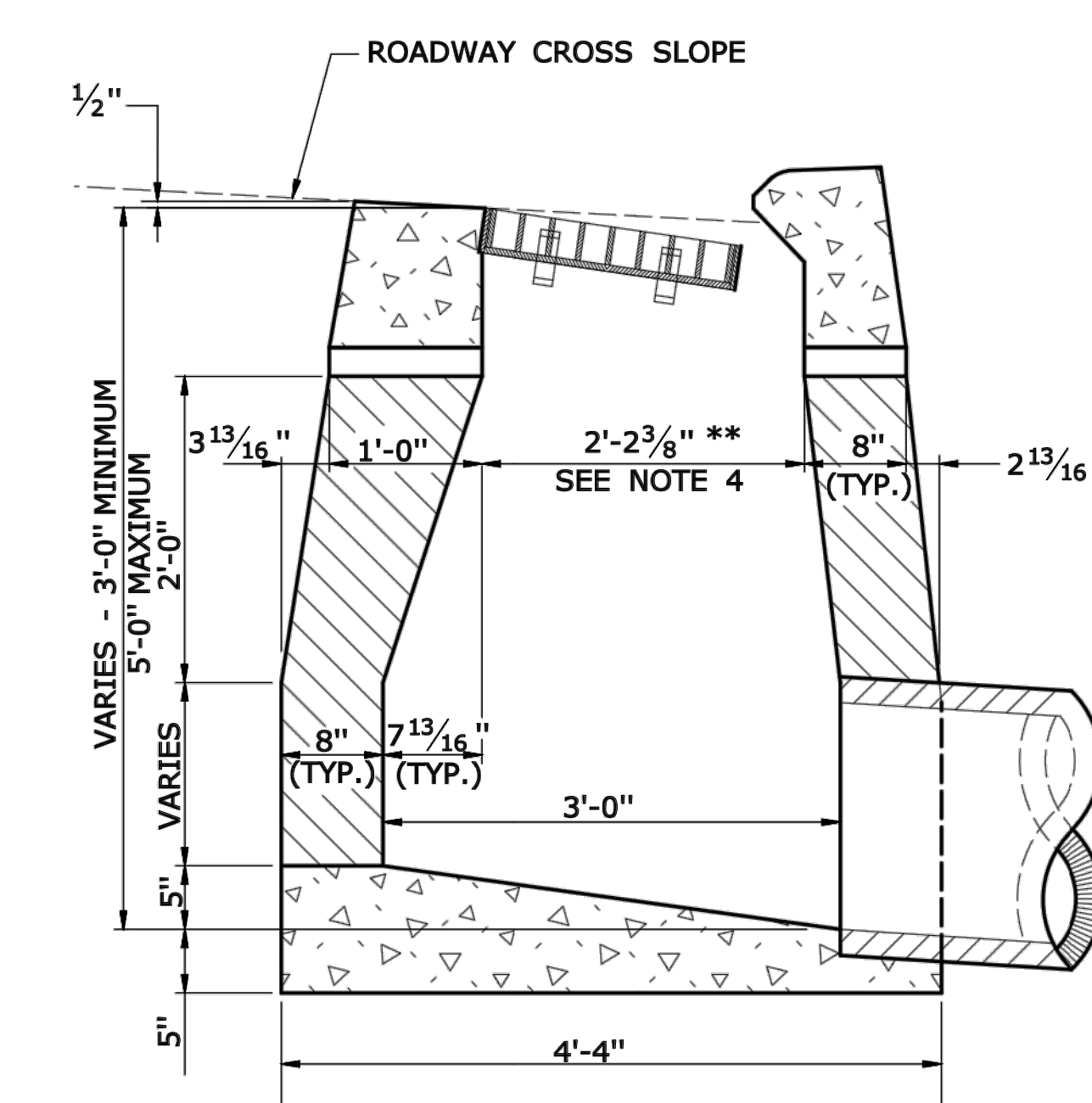
SECTION B

TYPE "C-L" DROP INLET



SECTION A

TYPE "C" & "C-L" DROP INLET (TYPE "C-L" TOP SHOWN)



SECTION B

TYPE "C" DROP INLET

**BROOKFIELD STREETSCAPE PHASE II
ROUTE 202 (FEDERAL ROAD)
BROOKFIELD, CONNECTICUT**



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FREEMAN COMPANIES, LLC
34 JOHN STREET
HARTFORD, CT 06106
WWW.FREEMANCO.COM
860.531.9500
TOLL FREE: 800.604.5141
FAX: 860.696.7165
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PREPARED FOR
TOWN OF BROOKFIELD
100 POCANO ROAD
BROOKFIELD,
CONNECTICUT 06804
OWNER FOR
TOWN OF BROOKFIELD
100 POCANO ROAD
BROOKFIELD,
CONNECTICUT 06804

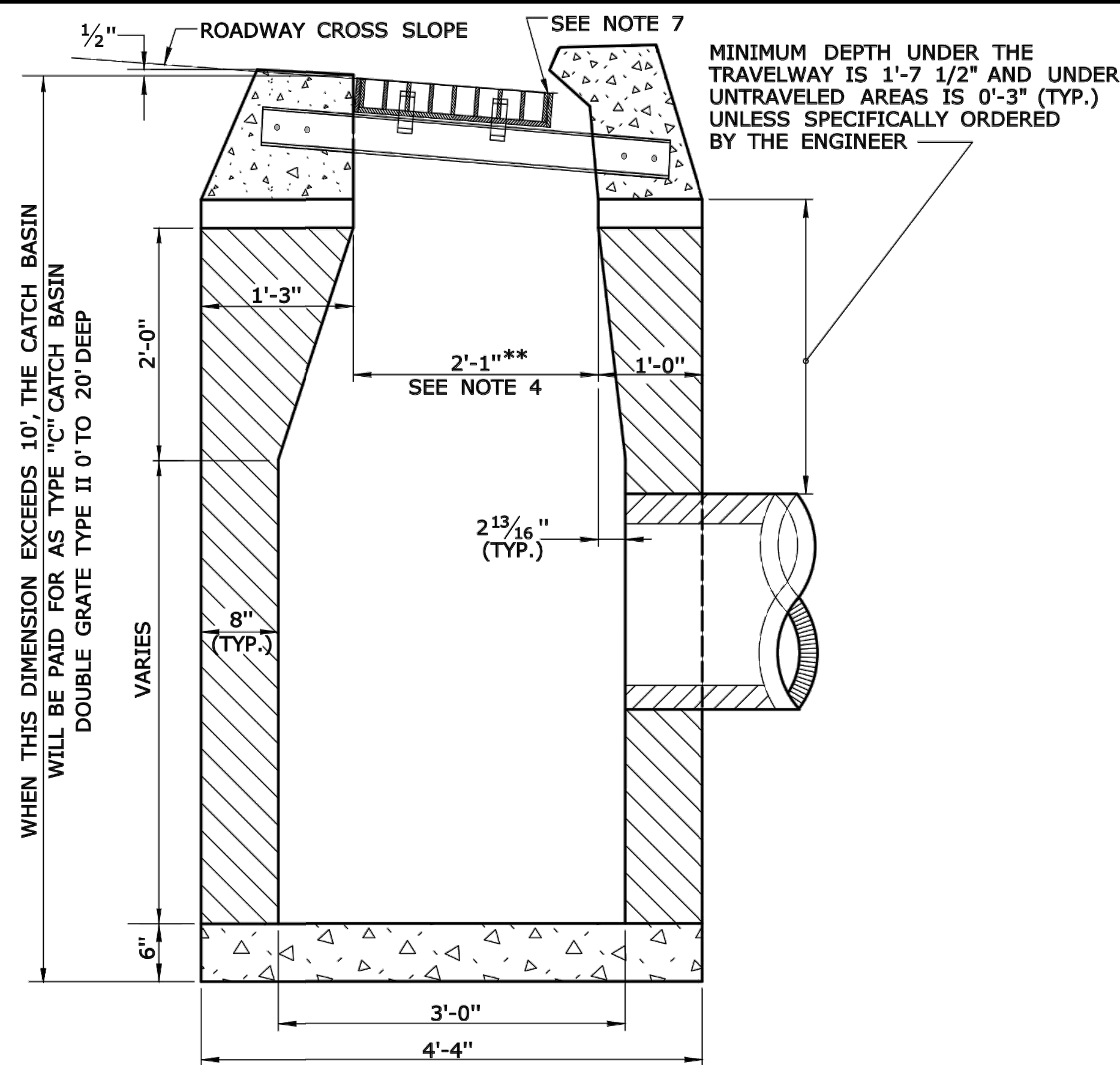
15YANG UN, PE, P10X NO. 23422

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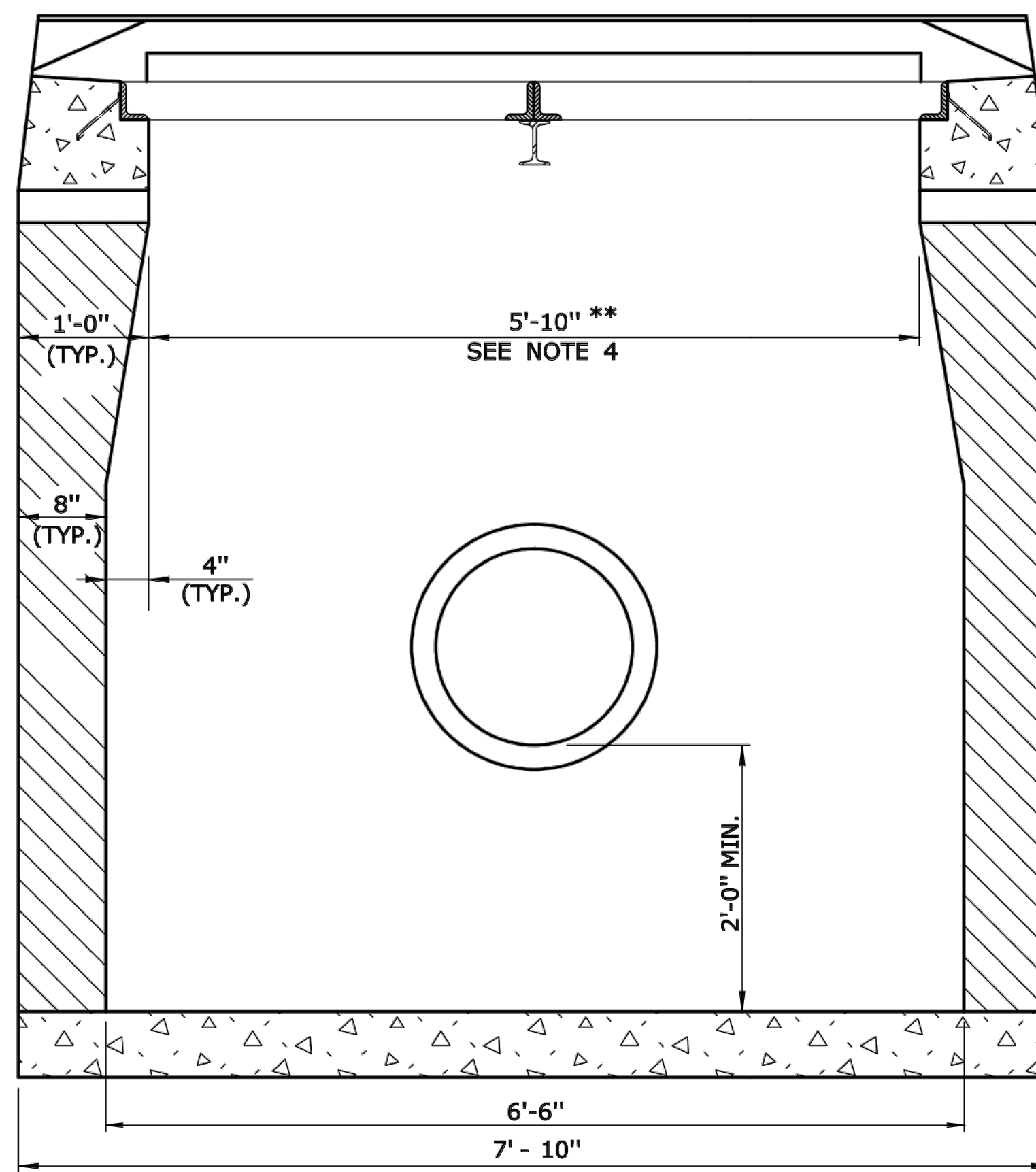
NO.	DATE	DESCRIPTION	REVISIONS

DESIGNED:	YL
DRAFTED:	PT
CHECKED:	RG
APPROVED:	
SCALE:	N.T.S.
PROJECT NO.:	2017-0605
DATE:	01/16/2019
FILE:	HW_MST_2017_0605_MDS

TITLE:	CATCH BASIN AND DROP INLET
SHEET NUMBER:	MDS-4

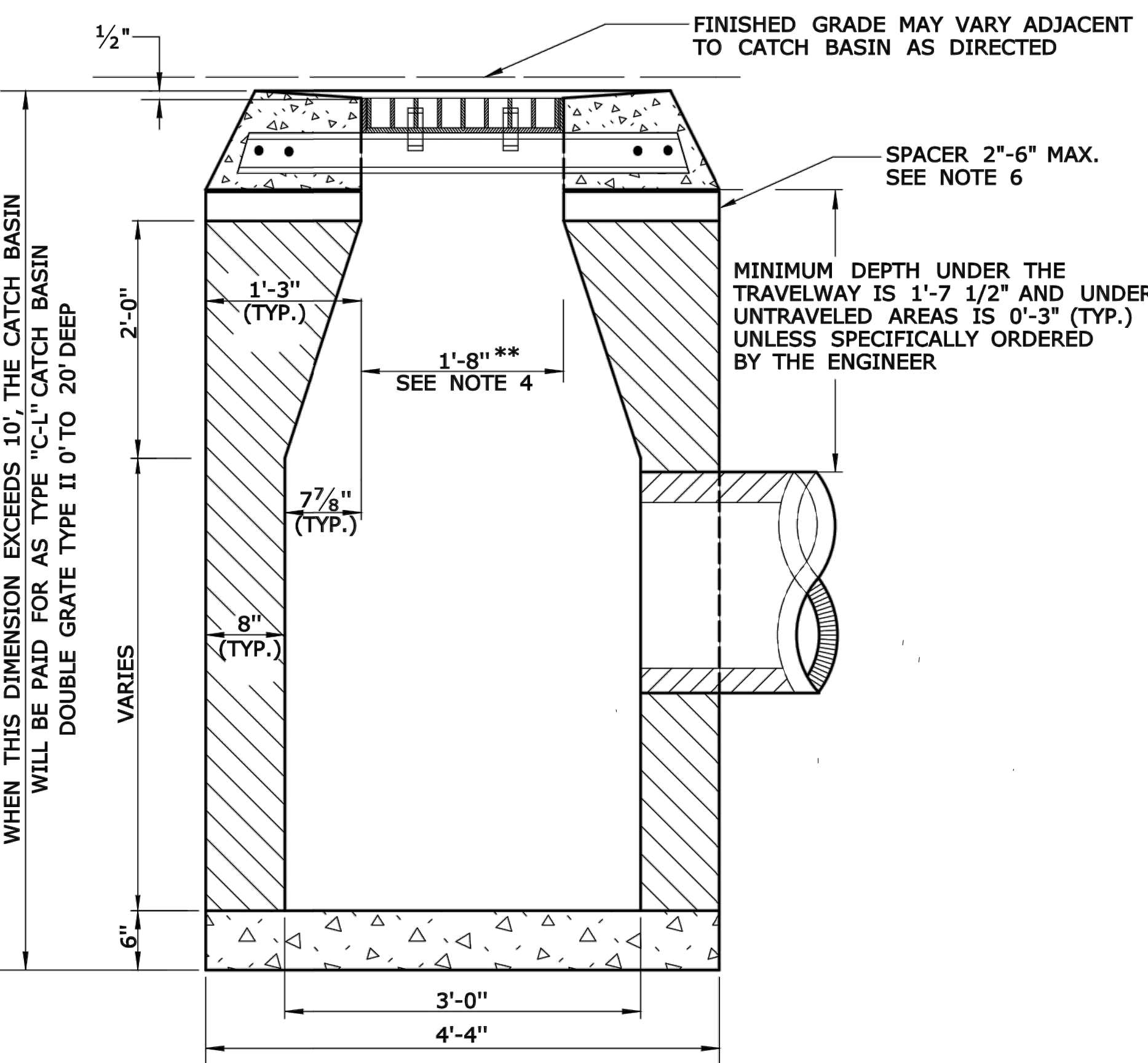


SECTION B

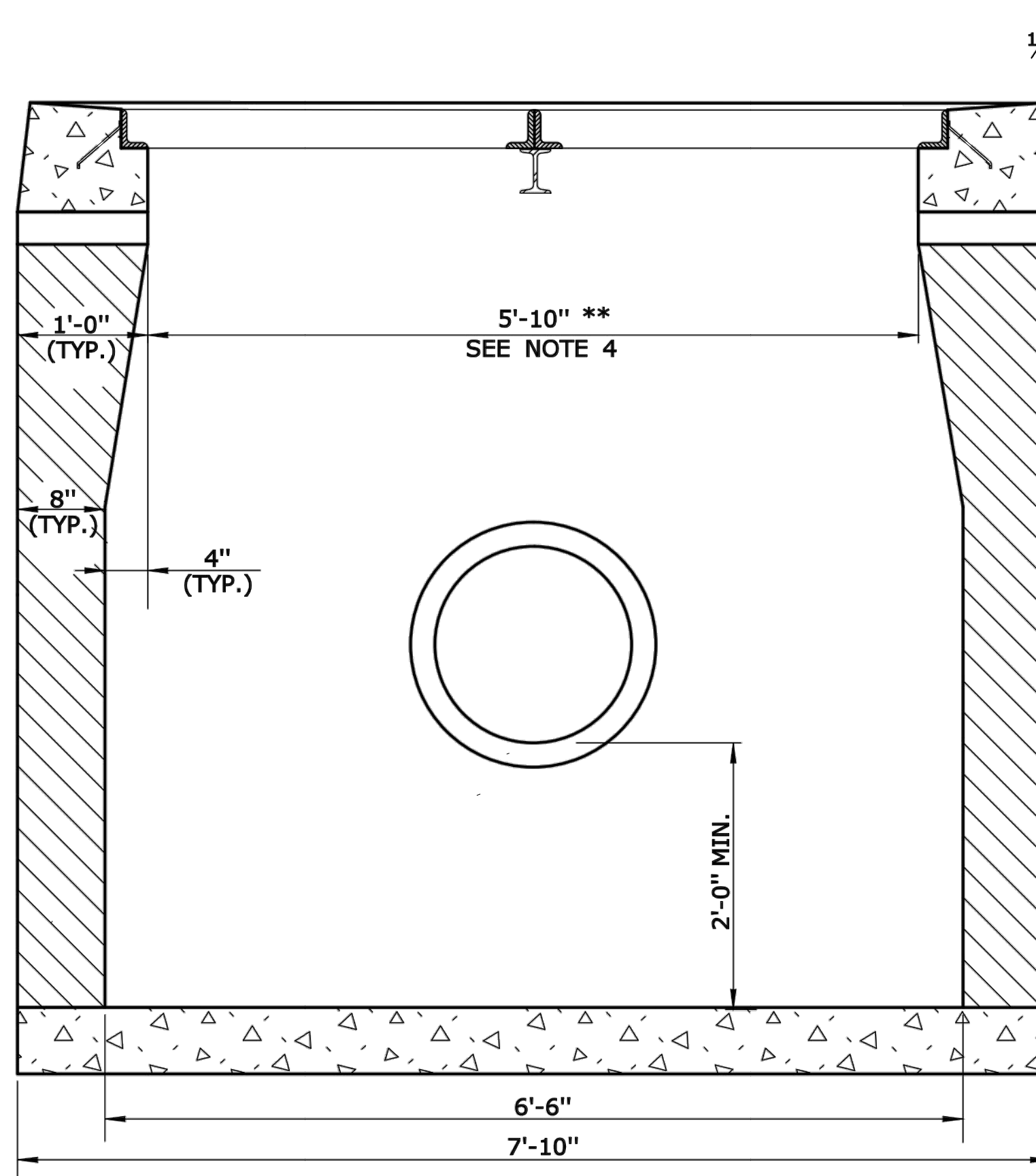


SECTION A

TYPE "C" CATCH BASIN DOUBLE GRATE - TYPE II



SECTION B

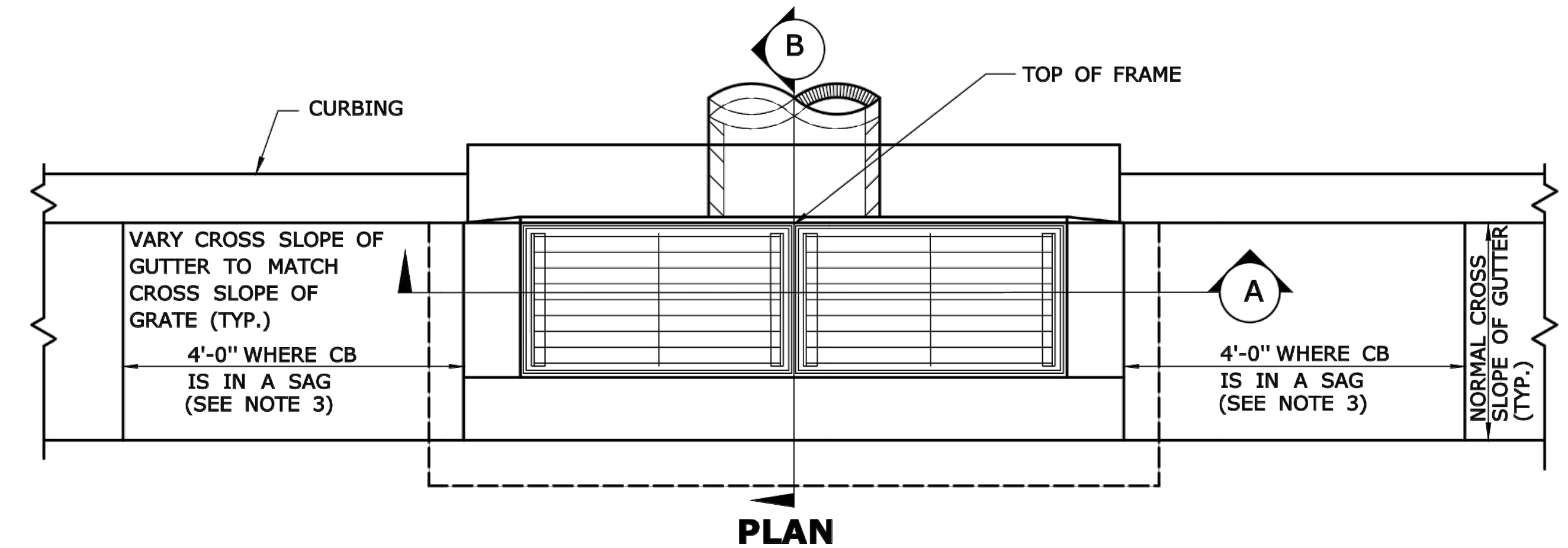


SECTION A

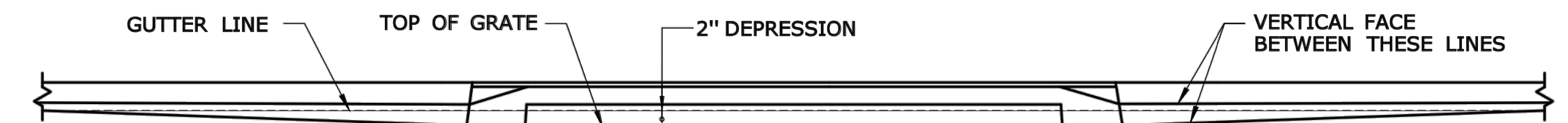
TYPE "C-L" CATCH BASIN DOUBLE GRATE - TYPE II

GENERAL NOTES:

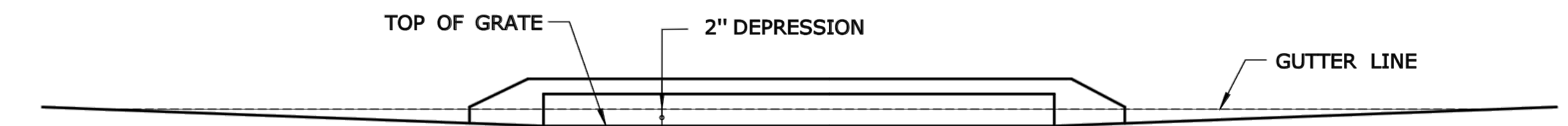
1. FOR CATCH BASIN TOPS, SEE DRAWING NO. DGS-07.
2. ALL THE FACES OF THE STRUCTURE IN CONTACT WITH CONCRETE PAVEMENT SHALL BE COVERED WITH A LAYER OF TAR PAPER OR APPROVED EQUAL.
3. USE 6'-0" ON UPGRADE SIDE (SEE PLAN VIEW) OF CONTINUOUS GRADE AND 1'-0" ON DOWNGRADE SIDE OF CONTINUOUS GRADE AS DIRECTED BY THE ENGINEER.
4. IF MASONRY UNITS ARE REQUIRED, THE BASIN SHALL BE CONSTRUCTED IN CONFORMANCE WITH DIMENSIONS SHOWN. CORBELLING SHALL BE PERMITTED TO A MAXIMUM OF 3". NO PROJECTION SHALL EXTEND INSIDE THE LIMITS NOTED BY **.
5. WALL THICKNESS OF ALL CATCH BASINS OVER 10' DEEP SHALL BE INCREASED TO 12" THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. 12" THICKNESS SHALL START AFTER THE FIRST 10'.
6. SPACERS CAN BE EITHER CONCRETE MASONRY UNIT OR PRECAST, WITH THE REQUIRED REINFORCING (RECOMMENDED BY THE MANUFACTURER) AS NEEDED TO PROVIDE THE PROPER GRADE SHOWN ON THE PLANS.
7. TOP OF FRAME ELEVATION SHALL BE MEASURED IN BETWEEN BOTH GRATES AT THE GUTTER.



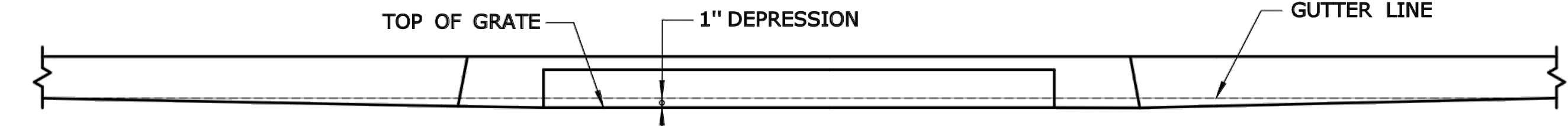
PLAN



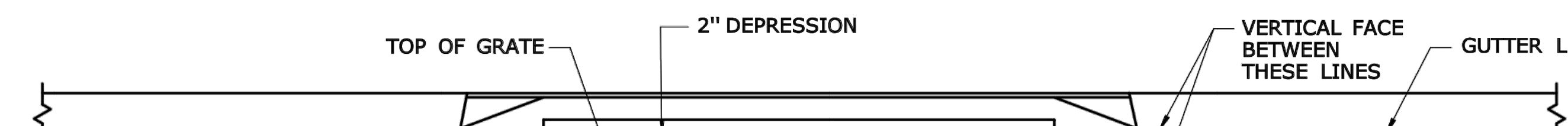
CATCH BASINS IN A LINE WITH 4" CONCRETE PARK CURBING OR 4" BITUMINOUS CONCRETE PARK CURBING



CATCH BASINS WHERE NO CURBING OF ANY TYPE EXISTS OR IS PROPOSED



CATCH BASINS IN A LINE WITH 6" CONCRETE CURBING OR 6" STONE CURBING



CATCH BASINS IN A LINE WITH 6" BITUMINOUS CONCRETE LIP CURBING (MACHINE FORMED)

DETAILS OF DEPRESSED GUTTER STRIP FOR TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II

FREEMAN COMPANIES
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 CIVIL | GEOTECHNICAL | SURVEY | ENVIRONMENTAL
 FREEMAN COMPANIES, LLC
 34 JOHN STREET
 HARTFORD, CT 06106
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PREPARED FOR
 TOWN OF BROOKFIELD
 100 POCONO ROAD
 BROOKFIELD,
 CONNECTICUT 06804
 OWNER FOR
 TOWN OF BROOKFIELD
 100 POCONO ROAD
 BROOKFIELD,
 CONNECTICUT 06804

DESIGNED BY: YL
 DRAFTED BY: PT
 CHECKED BY: RG
 APPROVED BY:
 SCALE: N.T.S.
 PROJECT NO.: 2017-0605
 DATE: 01/16/2019
 FILE: HW_MST_2017_0605_MDS

TITLE:
 CATCH BASIN TYPE
 DOUBLE GRATE II
 SHEET NUMBER:
 XSC-5

**BROOKFIELD STREETScape PHASE II
 ROUTE 202 (FEDERAL ROAD)
 BROOKFIELD, CONNECTICUT**

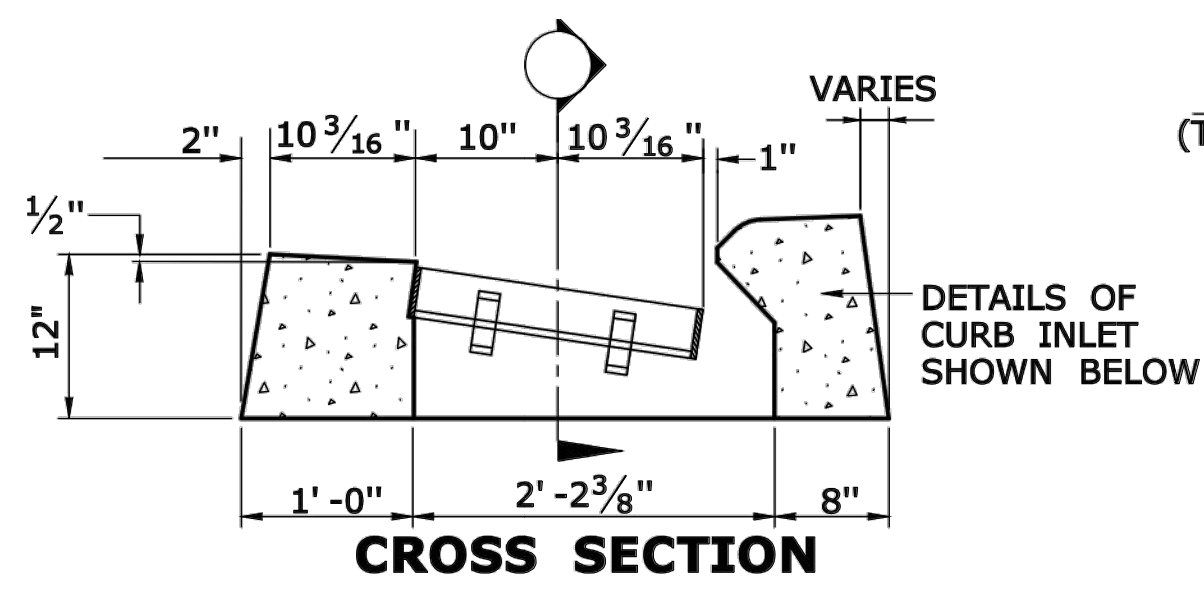
NO.	DATE	DESCRIPTION

DESIGNED: YL
 DRAFTED: PT
 CHECKED: RG
 APPROVED:
 SCALE: N.T.S.
 PROJECT NO.: 2017-0605
 DATE: 01/16/2019
 FILE: HW_MST_2017_0605_MDS

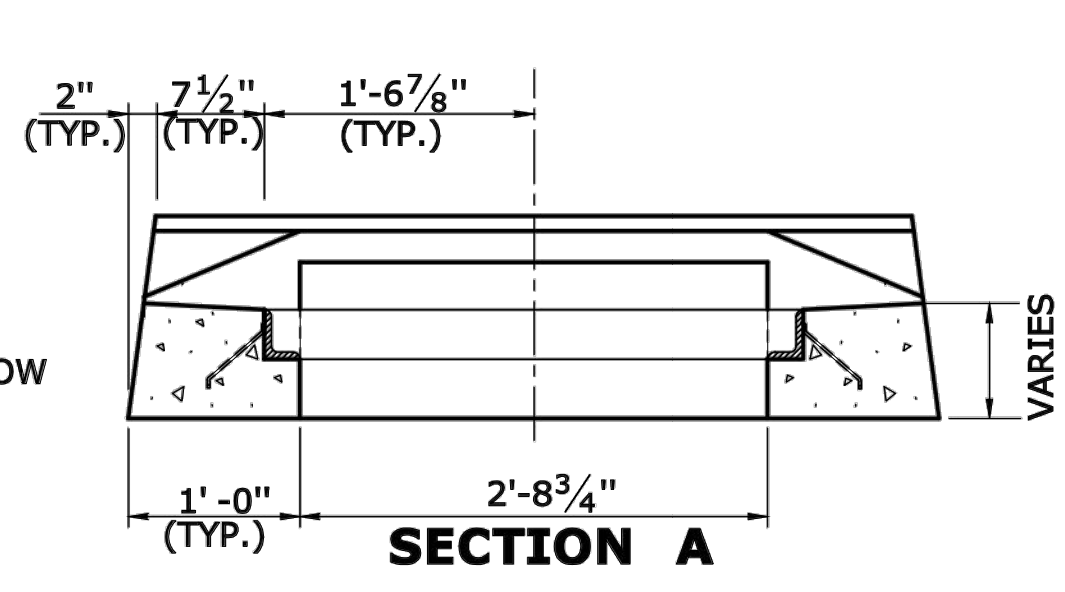
TITLE:
 CATCH BASIN TYPE
 DOUBLE GRATE II
 SHEET NUMBER:
 XSC-5

Freeman Companies, LLC - R:\2017\2017-0605 Brookfield Streetscape Phase 2\DWG\HW_MST_2017_0605_MDS.dwg, Jun 21, 2019 - 3:30pm Plotted By: plikauri

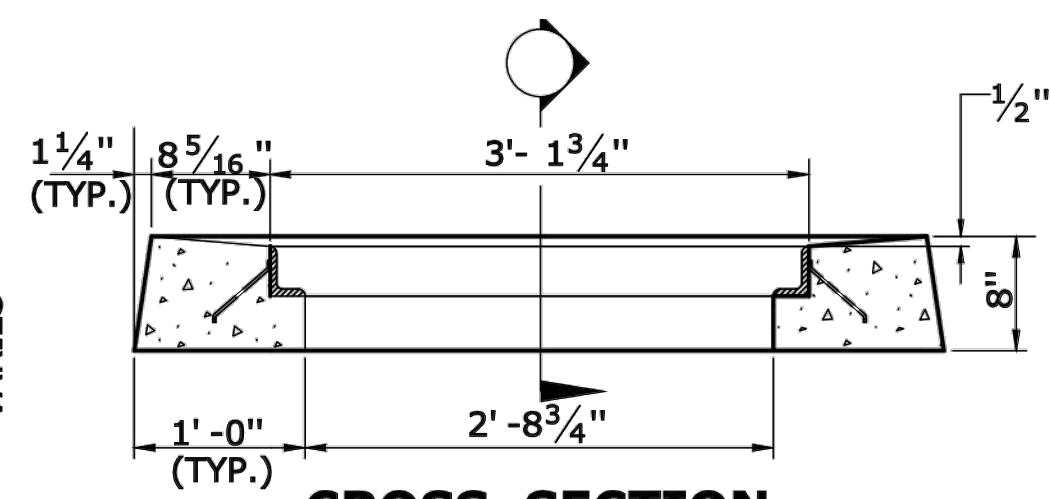
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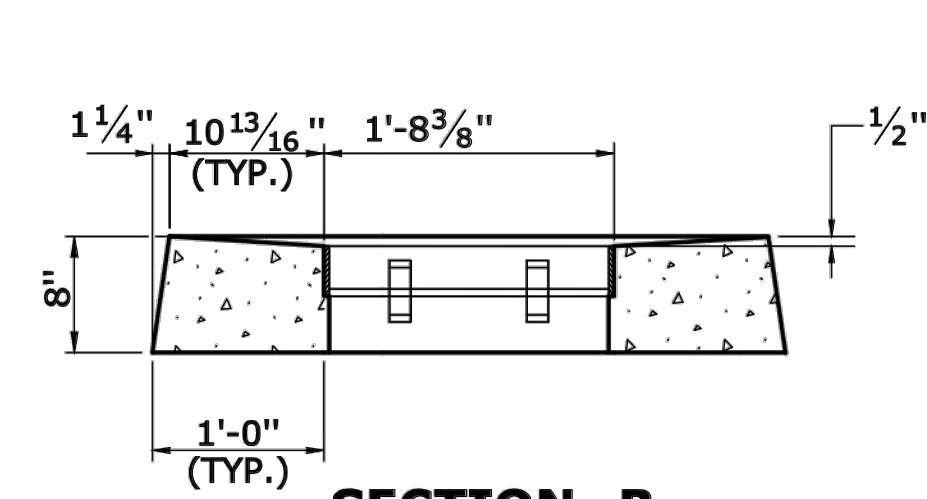
**CROSS SECTION
TYPE "C" CATCH BASIN TOP**



SECTION A



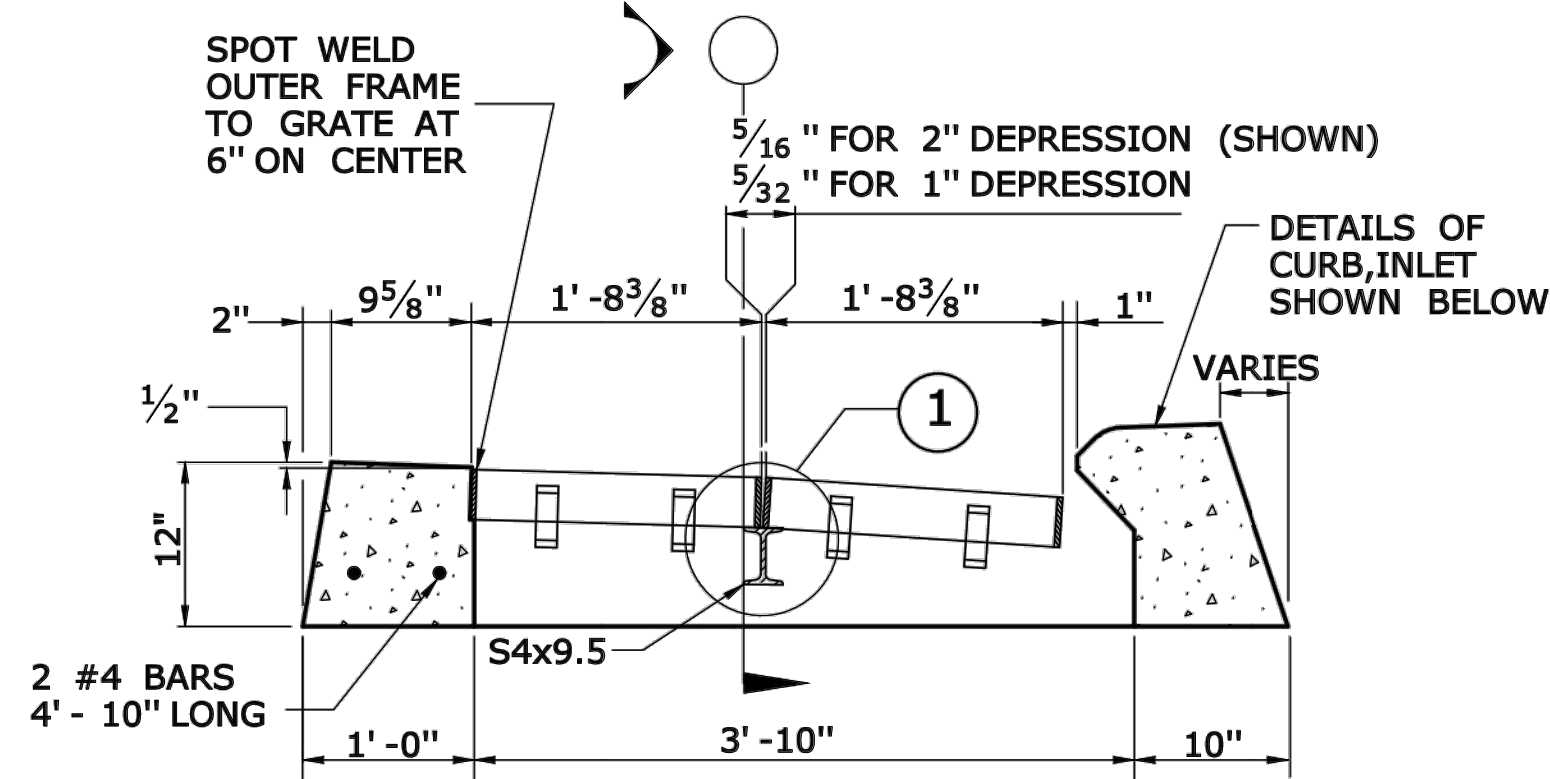
CROSS SECTION



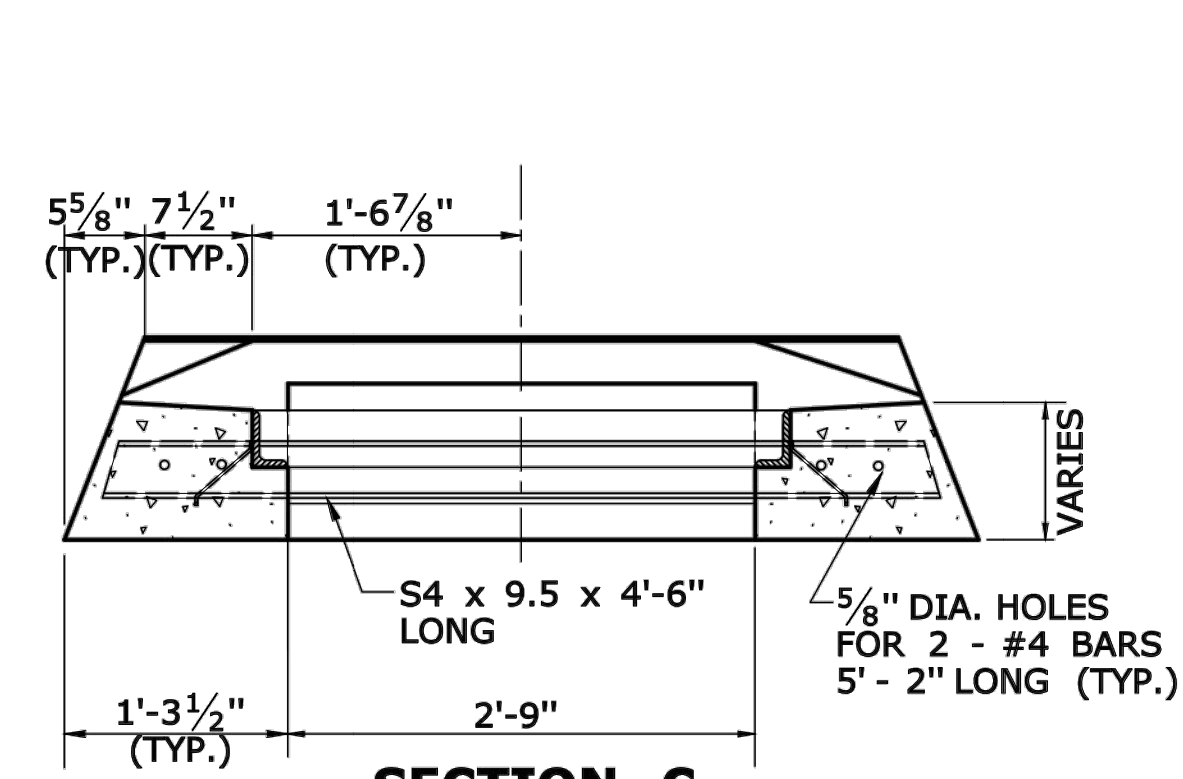
SECTION B

- GENERAL NOTES:**
- FOR DETAILS OF FRAMES AND GRATES, SEE DRAWING NO. DGS-08.
 - ALL BARS SHALL HAVE A MINIMUM 2" COVER.

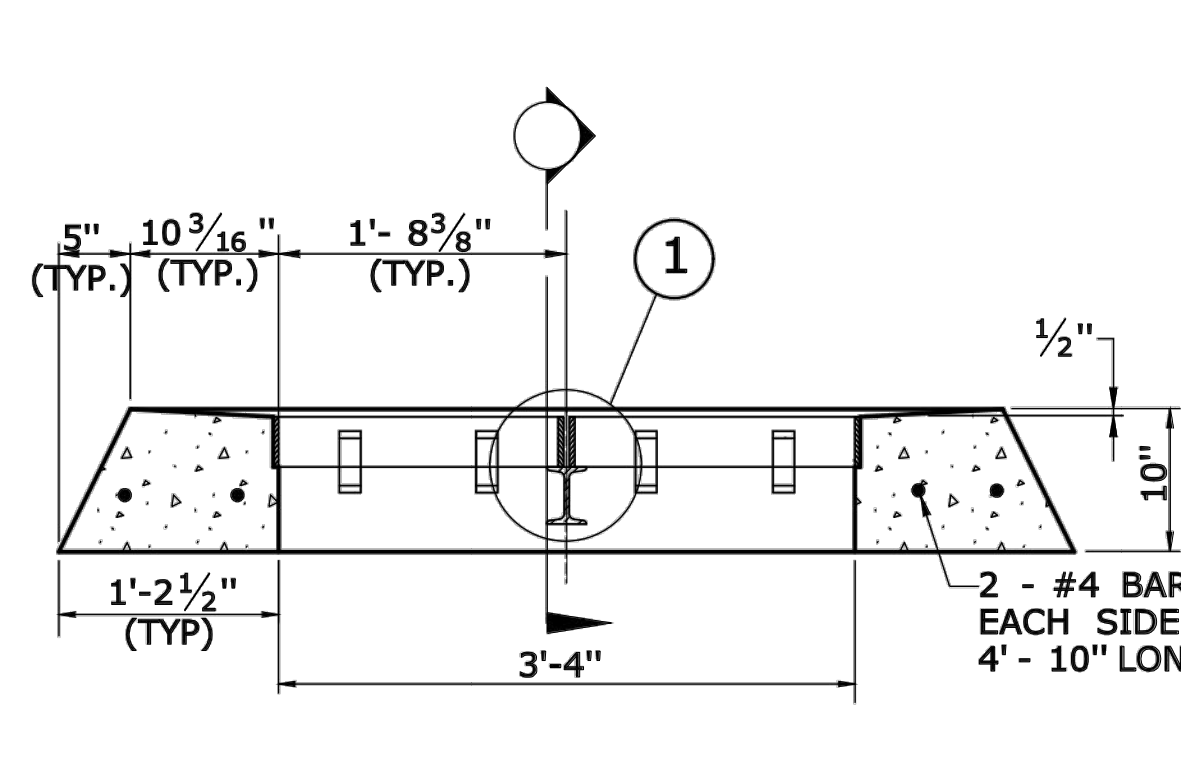
TYPE "C-L" CATCH BASIN TOP



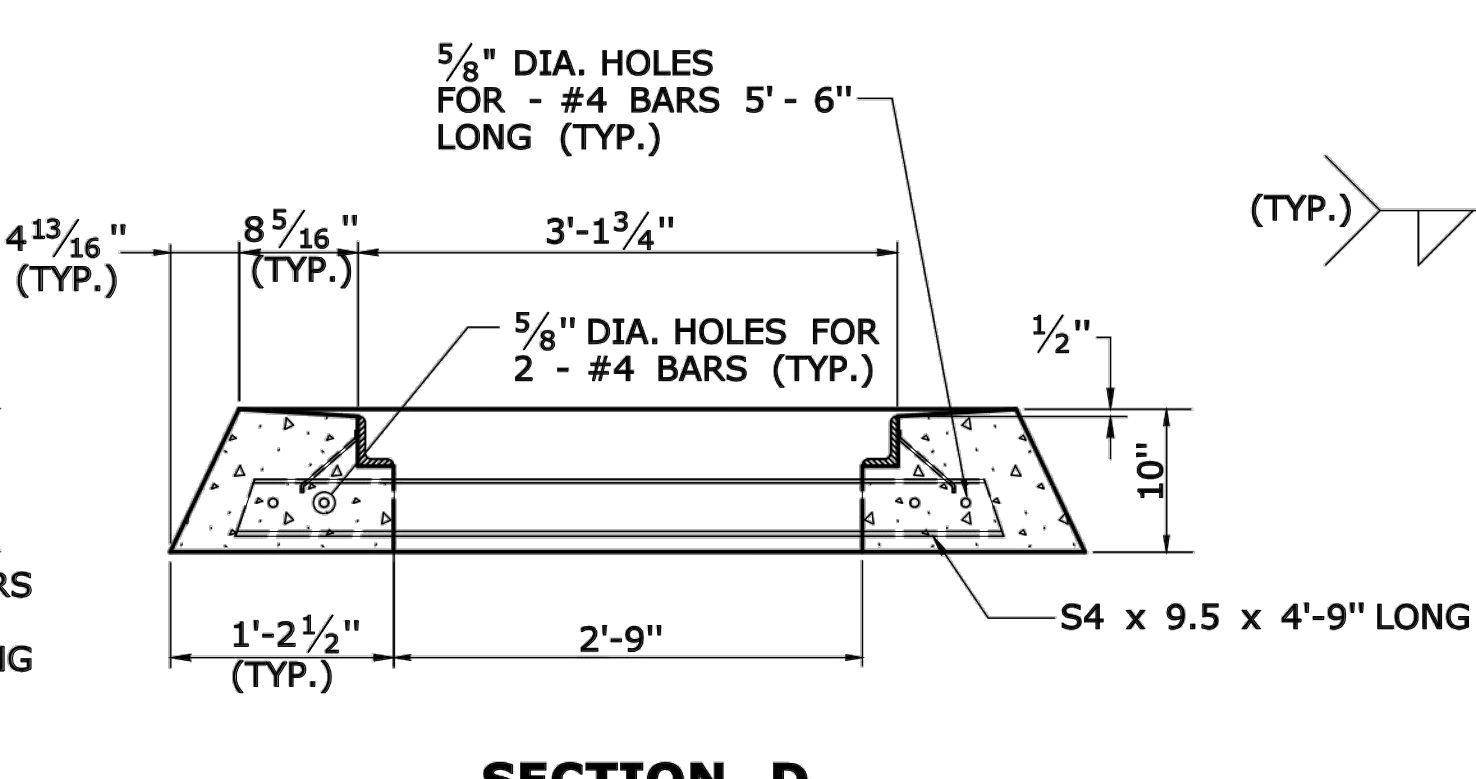
**CROSS SECTION
TYPE "C" CATCH BASIN DOUBLE GRATE - TYPE I TOP**



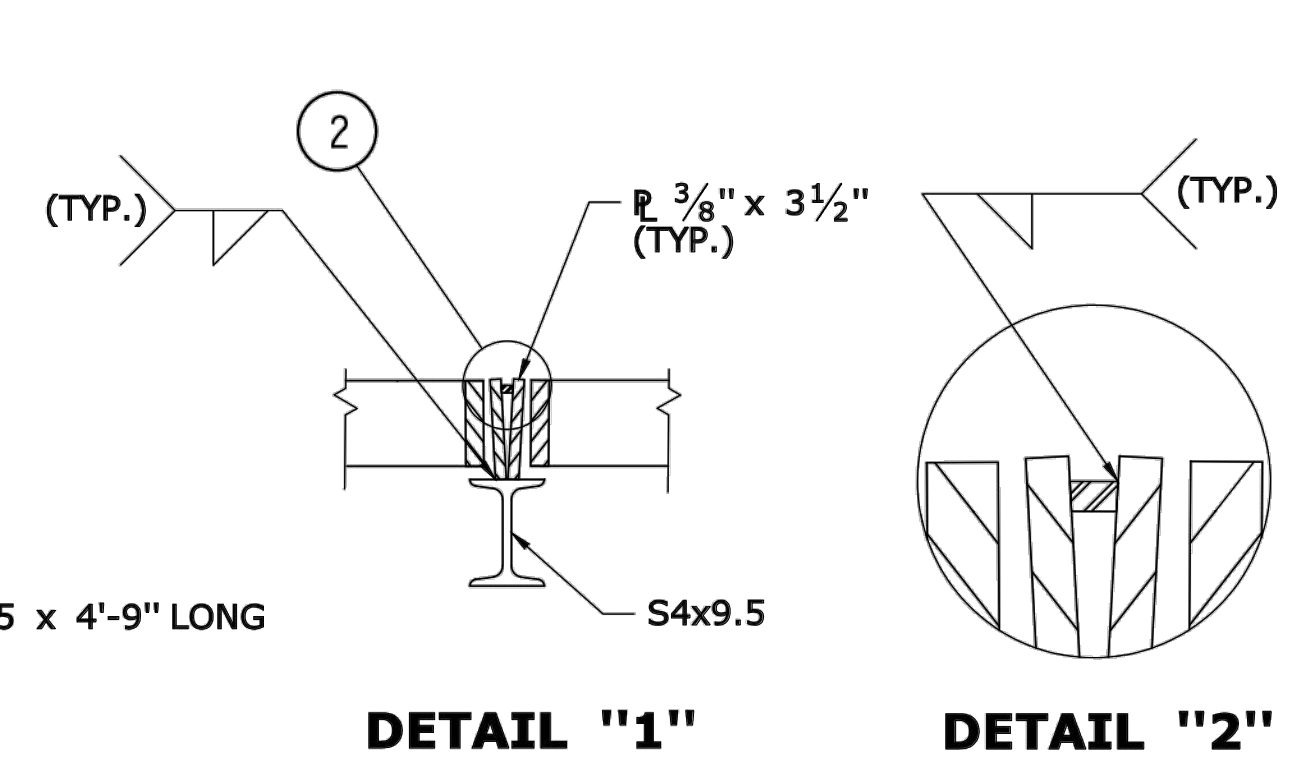
SECTION C



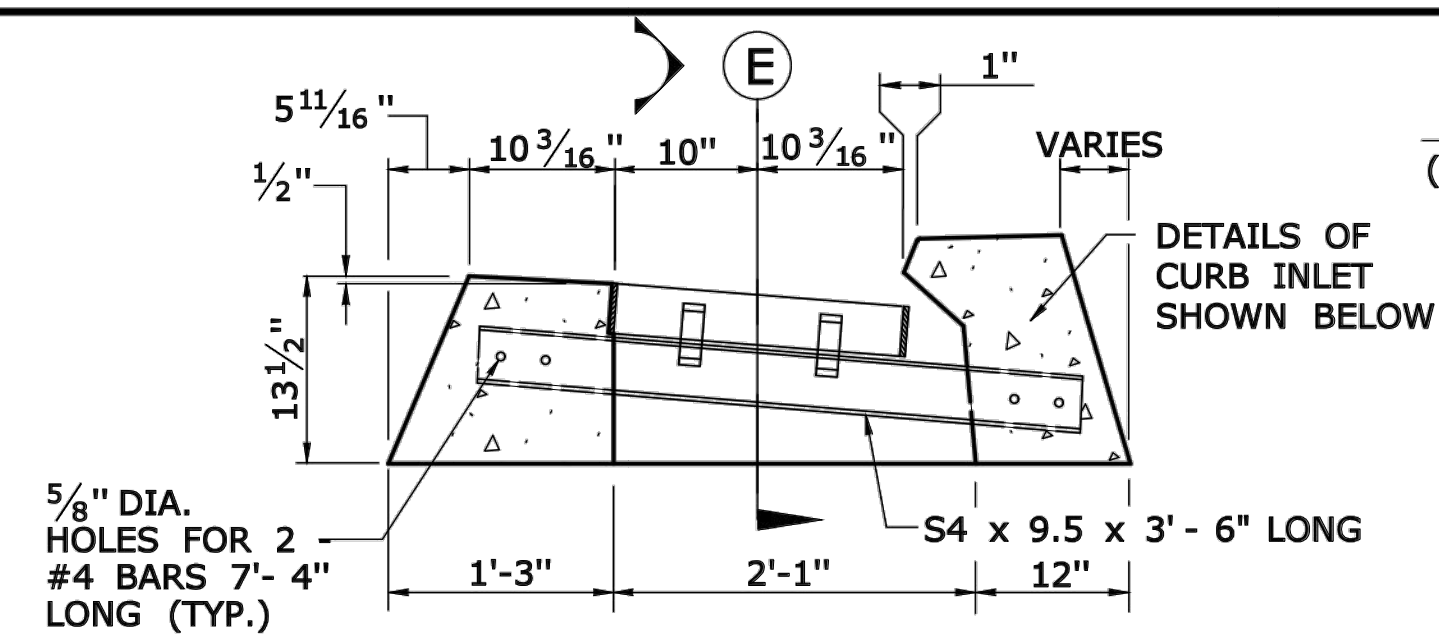
**CROSS SECTION
TYPE "C-L" CATCH BASIN DOUBLE GRATE - TYPE I TOP**



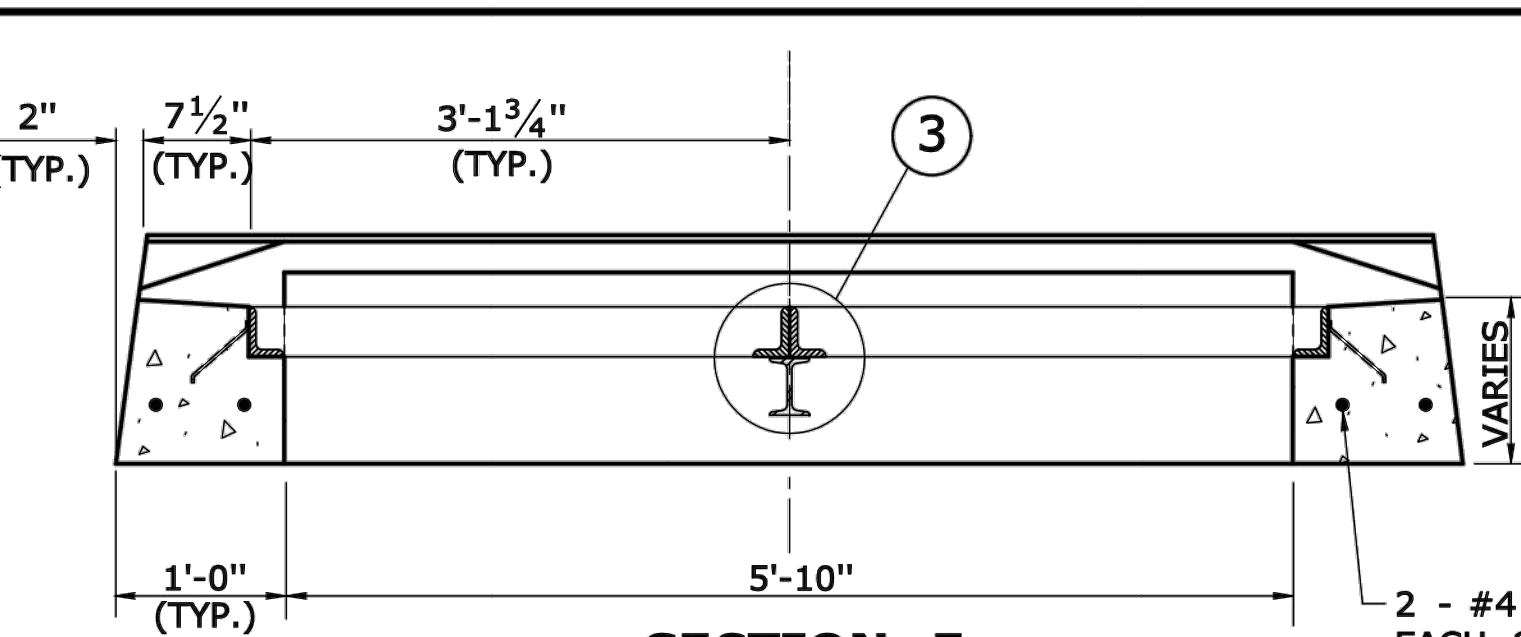
SECTION D



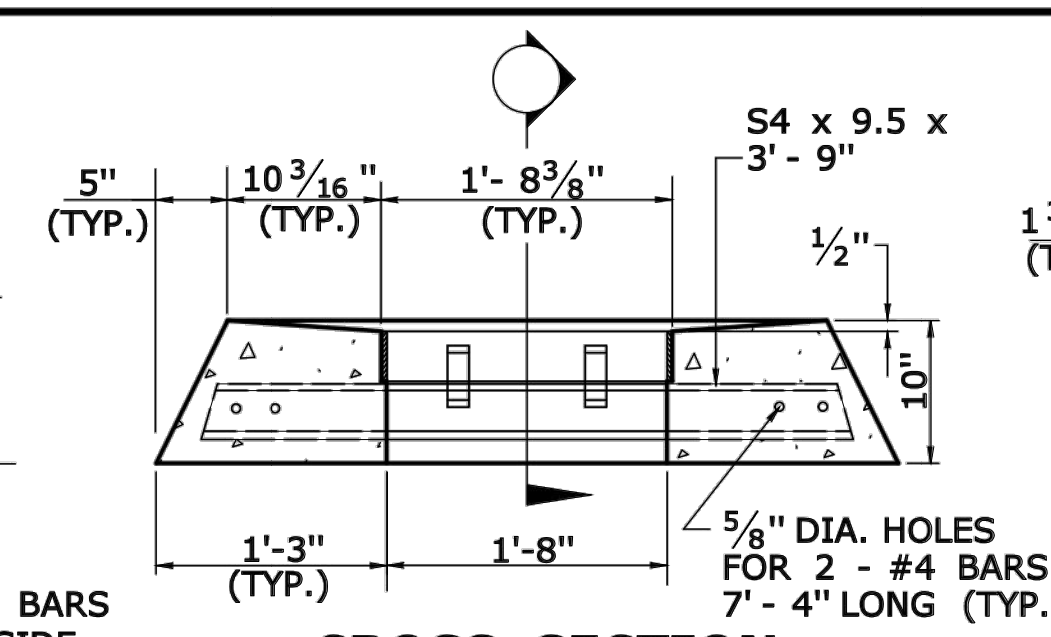
DETAIL "1" DETAIL "2"



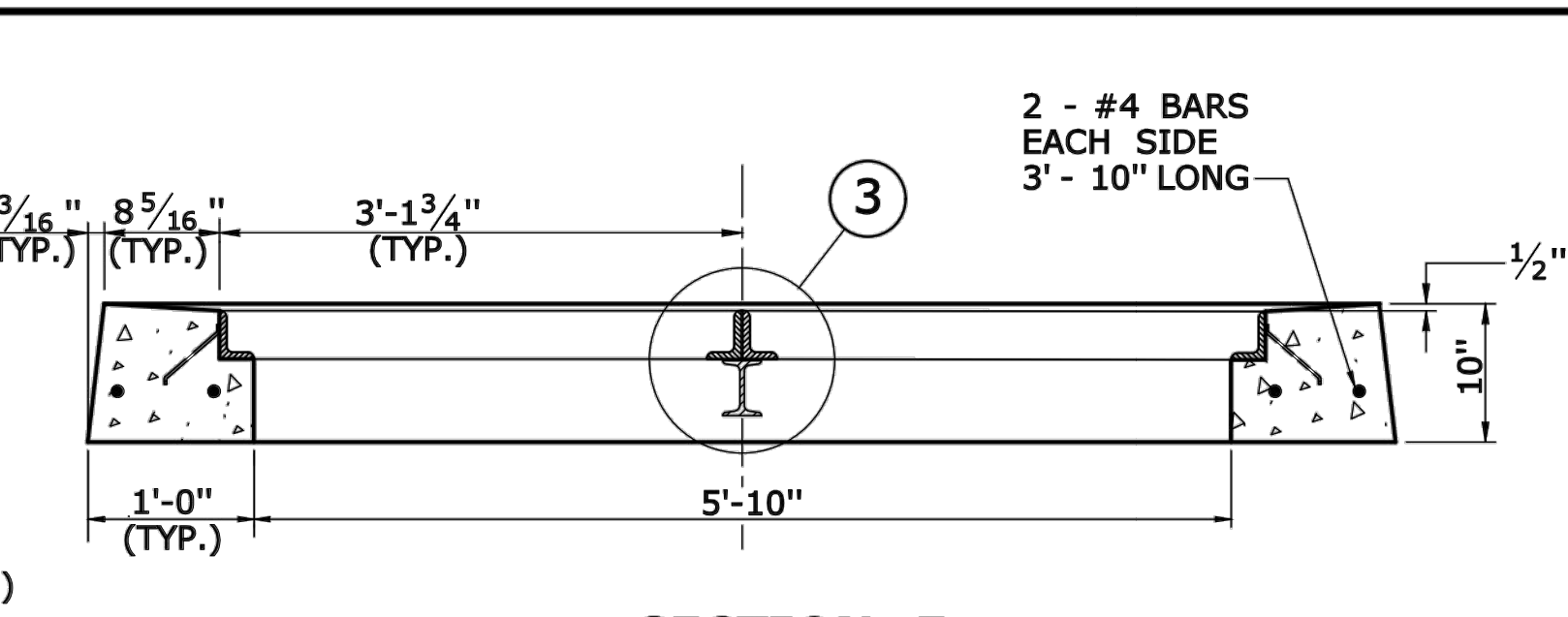
**CROSS SECTION
TYPE "C" CATCH BASIN DOUBLE GRATE - TYPE II TOP**



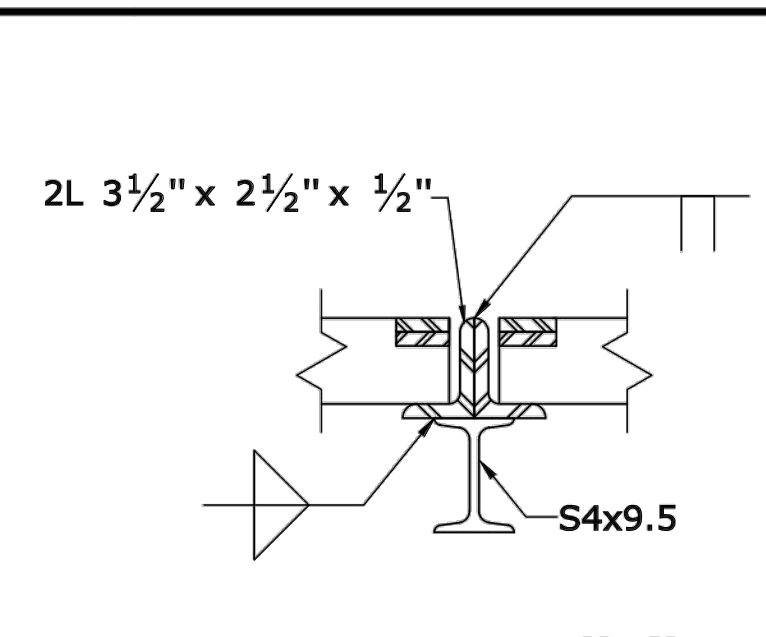
SECTION E



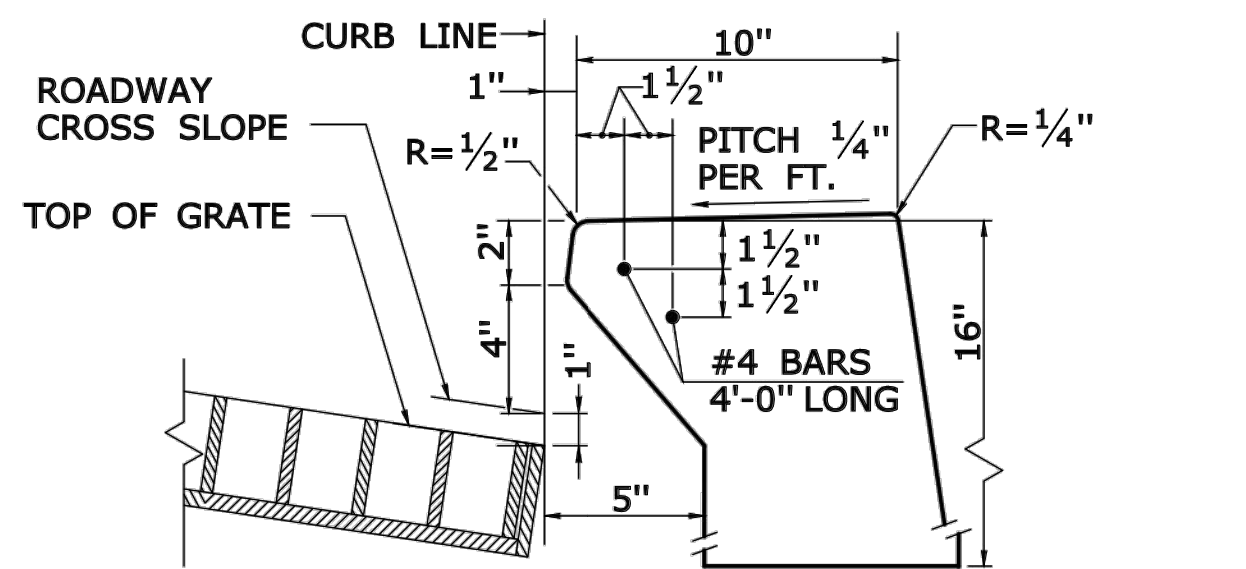
**CROSS SECTION
TYPE "C-L" CATCH BASIN DOUBLE GRATE - TYPE II TOP**



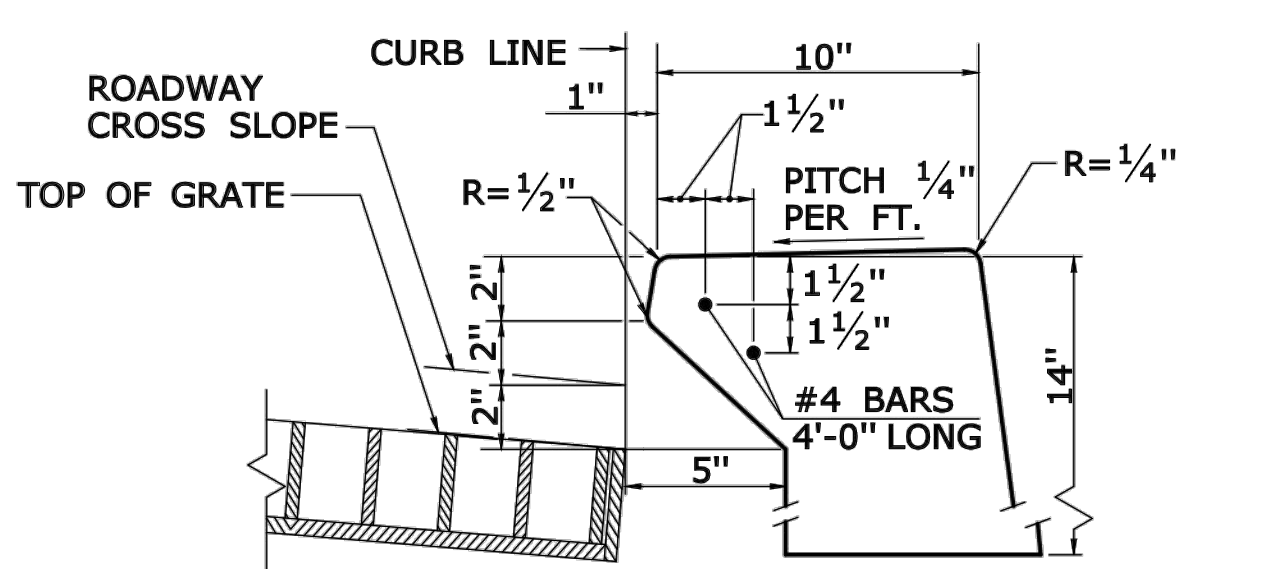
SECTION F



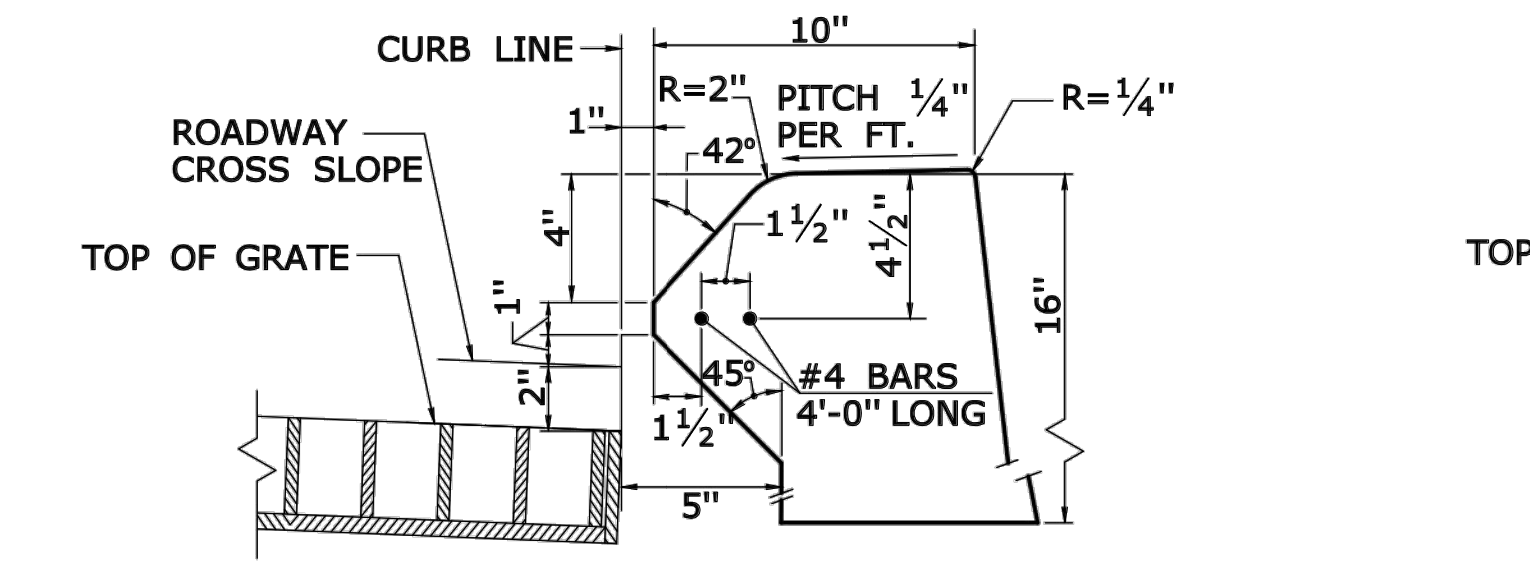
DETAIL "3"



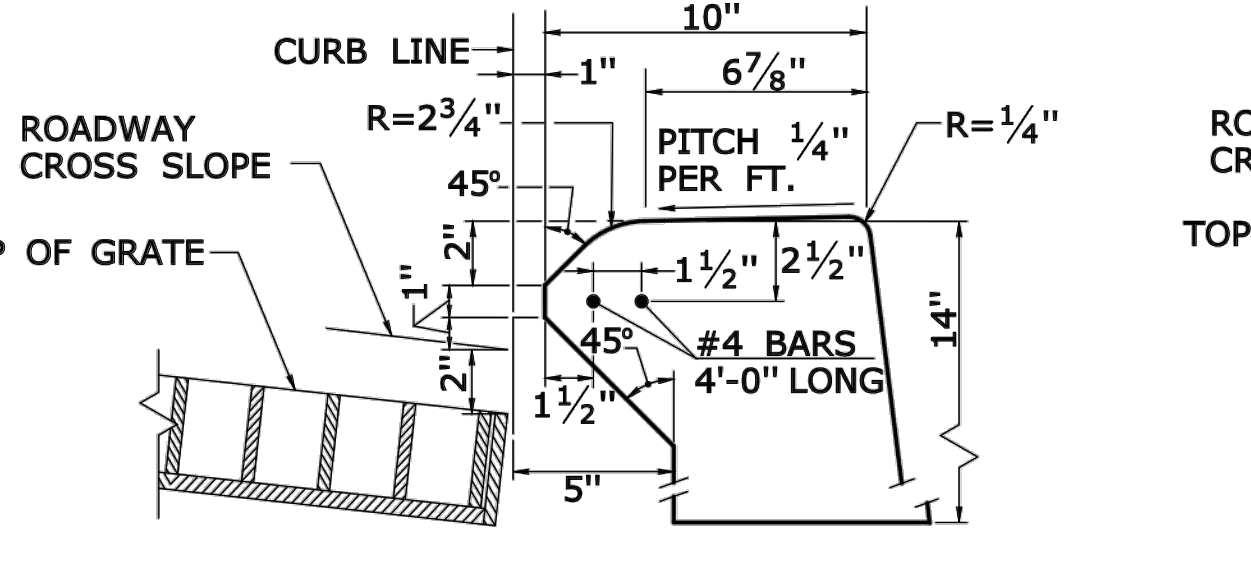
**INLET WITH 6" CONCRETE OR
STONE CURBING FOR TYPE "C" CB**



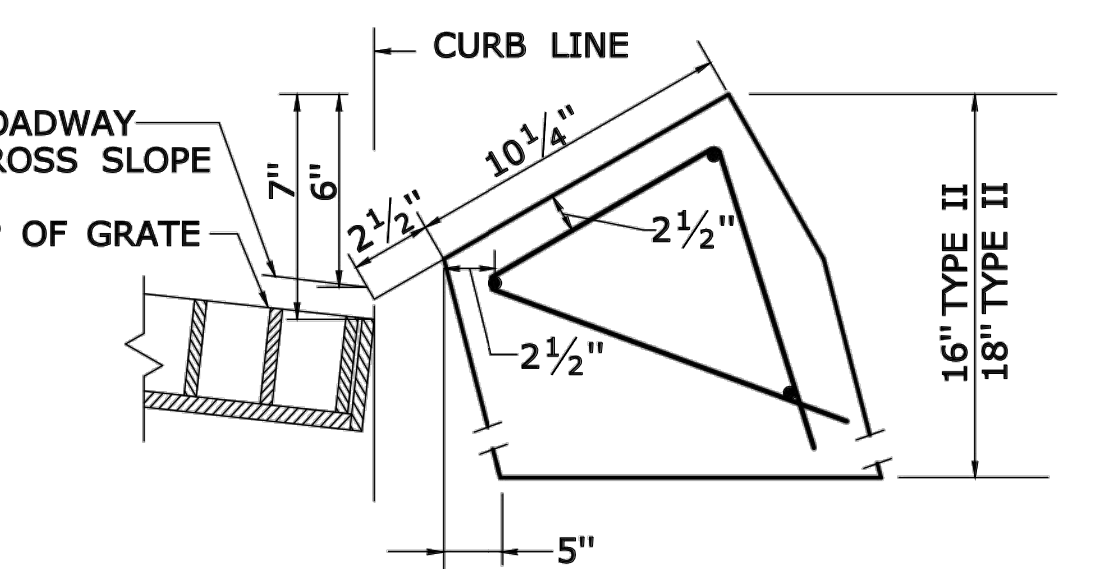
**INLET WITH NO CURBING
(PLAIN TYPE) FOR TYPE "C" CB**



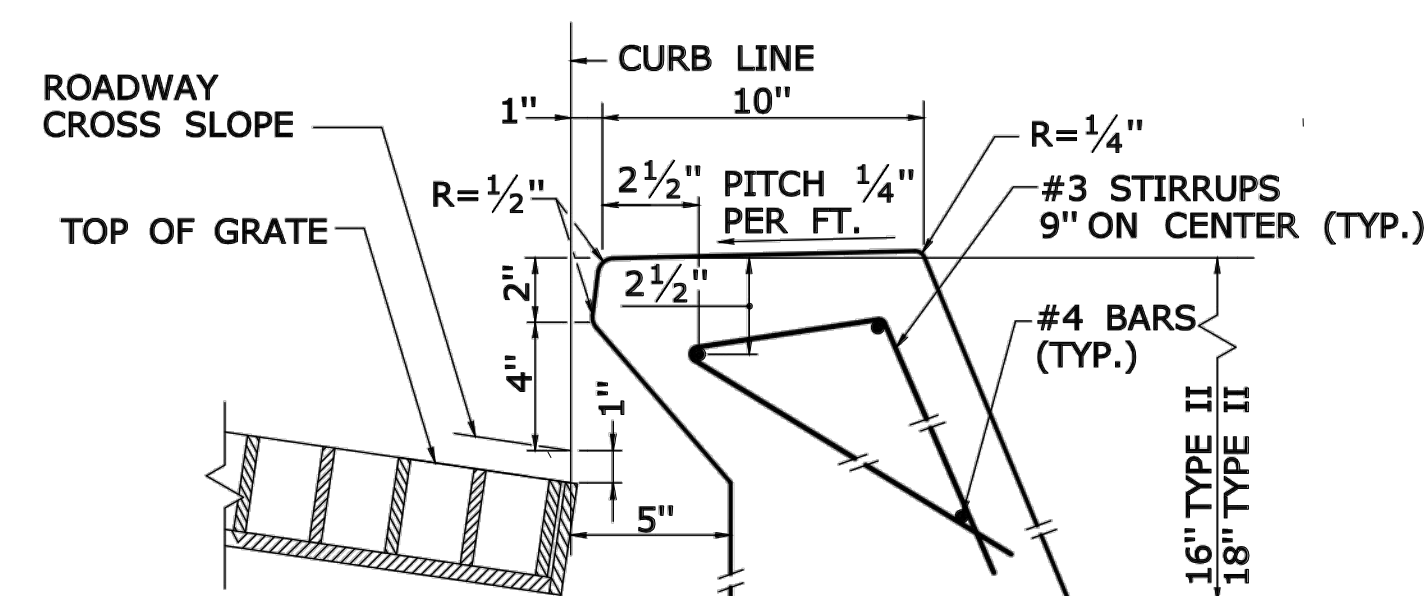
**INLET WITH 6" BITUMINOUS
CONCRETE LIP CURBING FOR TYPE "C" CB**



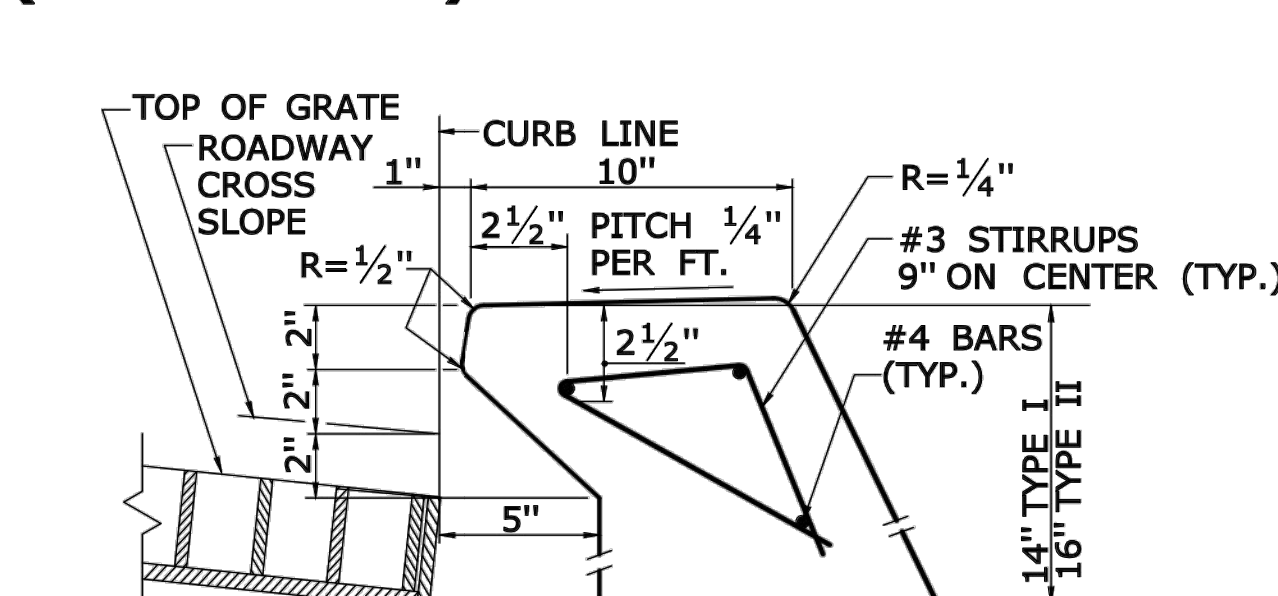
**INLET WITH 4" CONCRETE
PARK CURBING FOR TYPE "C" CB**



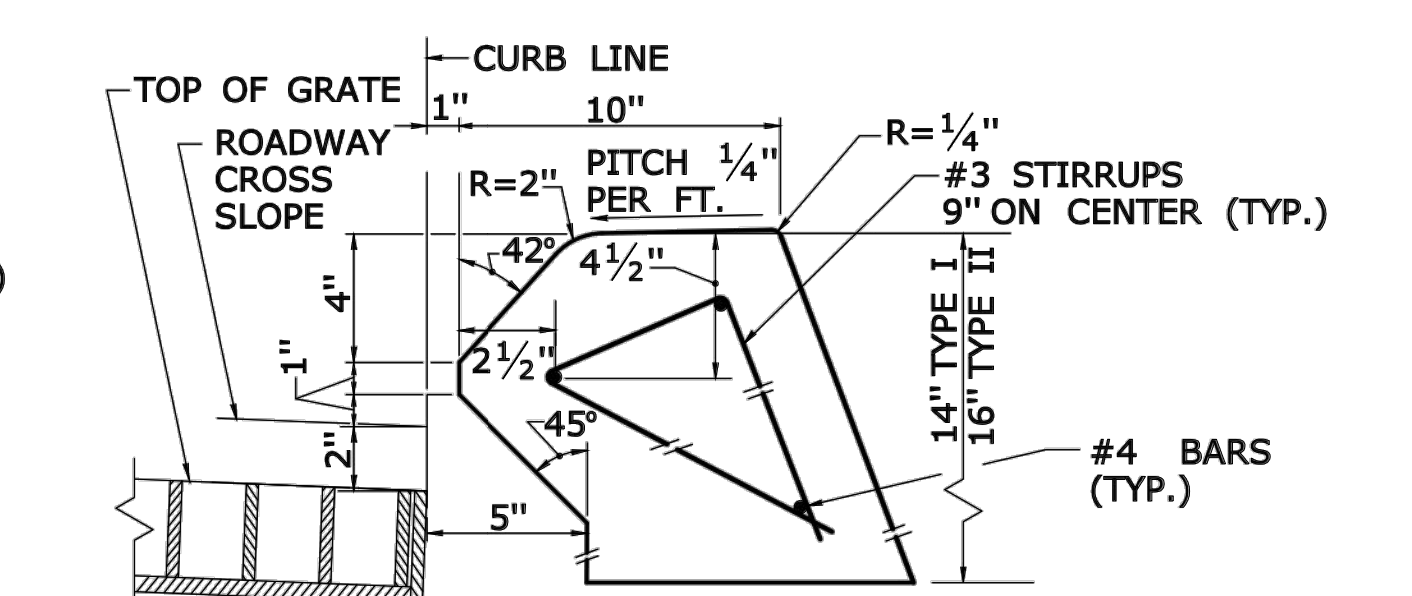
**INLET WITH GRANITE
SLOPE CURB FOR TYPE "C" CB**



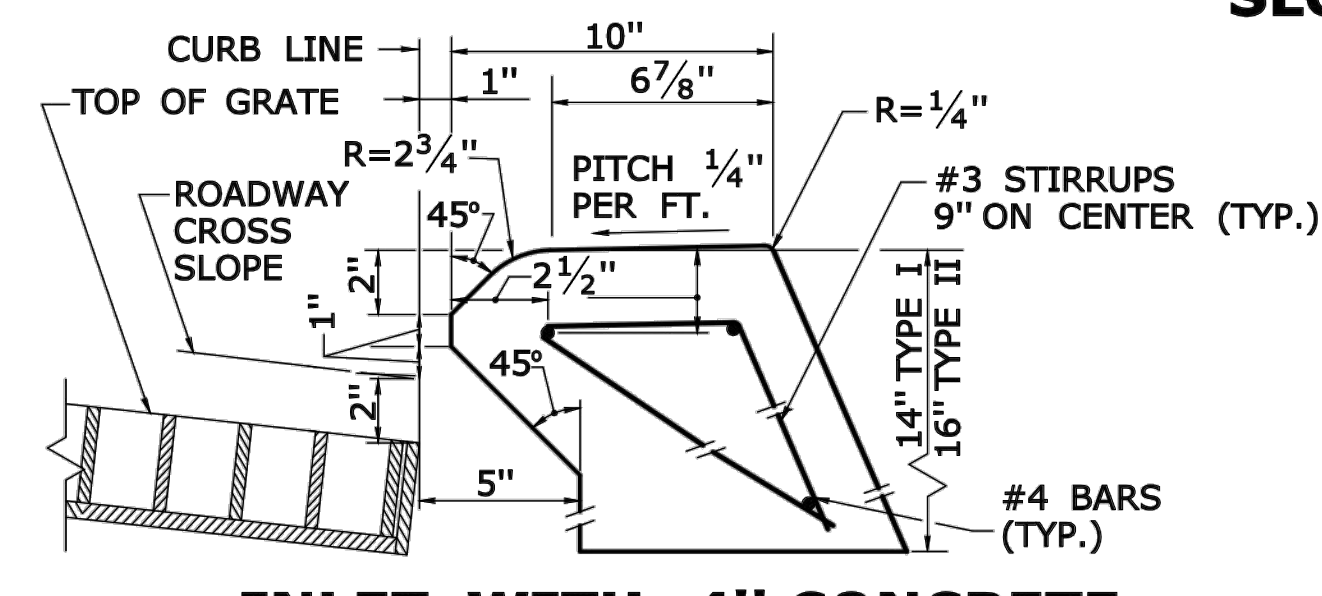
**INLET WITH 6" CONCRETE OR
STONE CURBING FOR TYPE "C" CB
DOUBLE GRATE TYPE I & II**



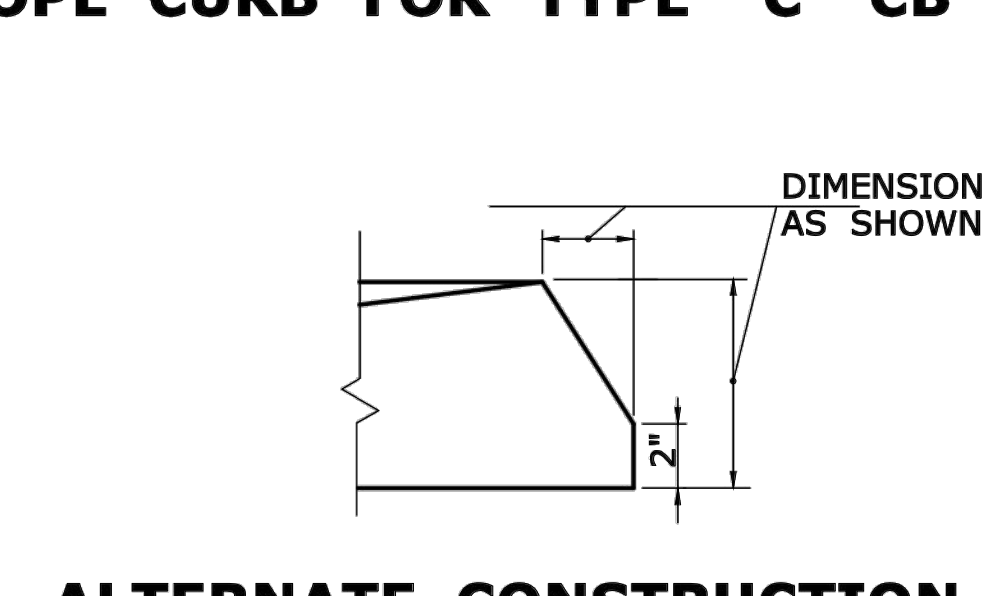
**INLET WITH NO CURBING
(PLAIN TYPE) FOR TYPE "C" CB
DOUBLE GRATE TYPE I & II**



**INLET WITH 6" BITUMINOUS
CONCRETE LIP CURBING FOR TYPE "C" CB
DOUBLE GRATE TYPE I & II**



**INLET WITH 4" CONCRETE
PARK CURBING FOR TYPE "C" CB
DOUBLE GRATE TYPE I & II**



**ALTERNATE CONSTRUCTION
OF TYPE II TOP**

**BROOKFIELD STREETSCAPE PHASE II
ROUTE 202 (FEDERAL ROAD)
BROOKFIELD, CONNECTICUT**



FREEMAN COMPANIES, LLC
36 JOHN STREET
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ELEVATE YOUR EXPECTATIONS

PREPARED FOR:
TOWN OF BROOKFIELD
100 POCOCK ROAD
BROOKFIELD,
CONNECTICUT 06804

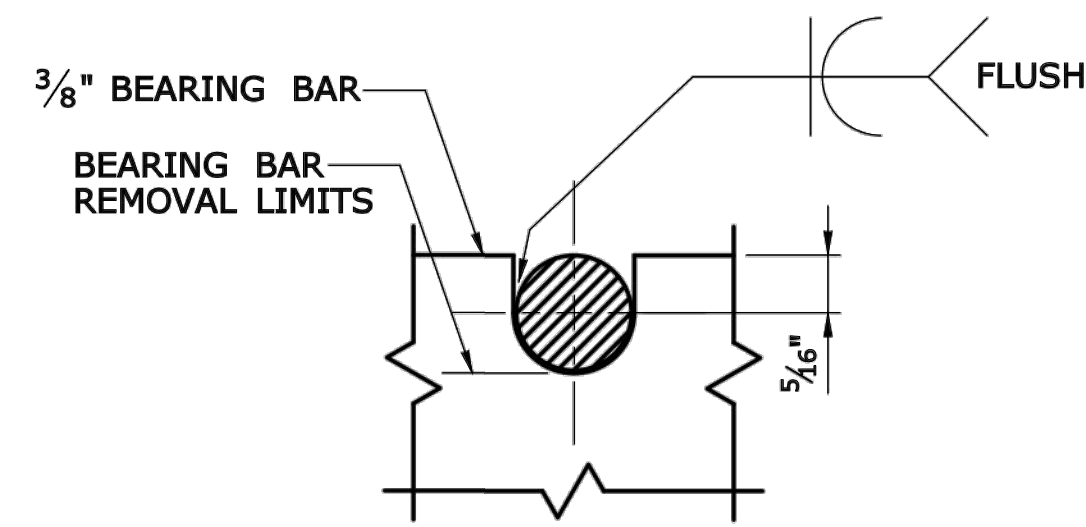
OWNER FOR:
TOWN OF BROOKFIELD
100 POCOCK ROAD
BROOKFIELD,
CONNECTICUT 06804

NO. 23422
TUYANG UN, PE, P10X

DESIGNED:	YL	
DRAFTED:	PT	
CHECKED:	RG	
APPROVED:		
SCALE:	N.T.S.	
PROJECT NO.:	2017-0605	
DATE:	01/16/2019	
FILE:	HWL_MST_2017_0605_MDS	
NO.	DATE	DESCRIPTION
REVISIONS		

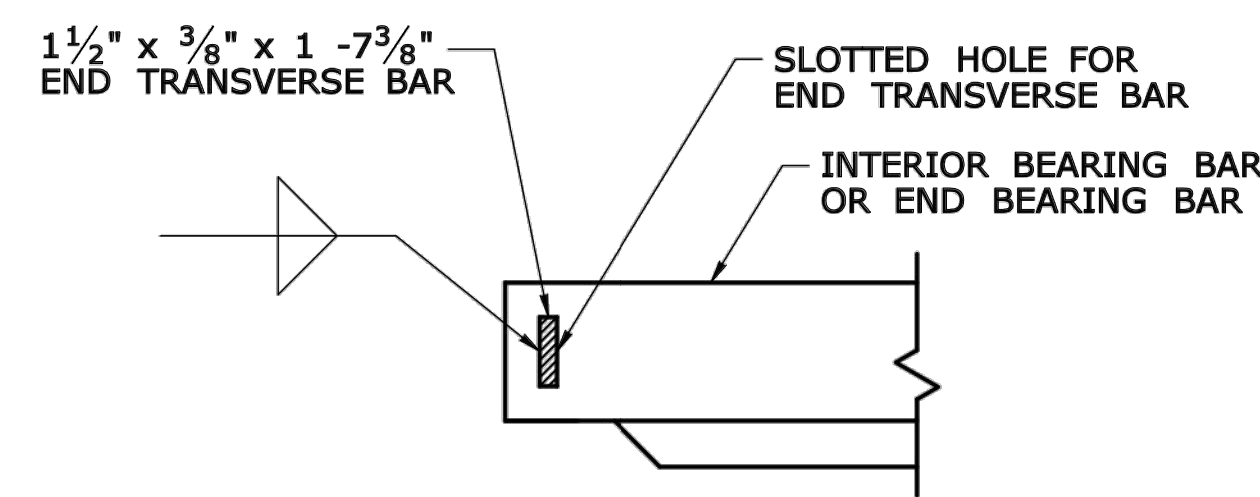
TITLE:	CATCH BASIN TOPS TYPE "C" & "C-L"
SHEET NUMBER:	MDS-6

Freeman Companies, LLC - R: 12/07/2017-0605 - Brookfield Streetscape Phase 2.DWG\HWL_MST_2017_0605_MDS.dwg - Jan 21, 2019 - 3:30pm - Plotted By: plikauri

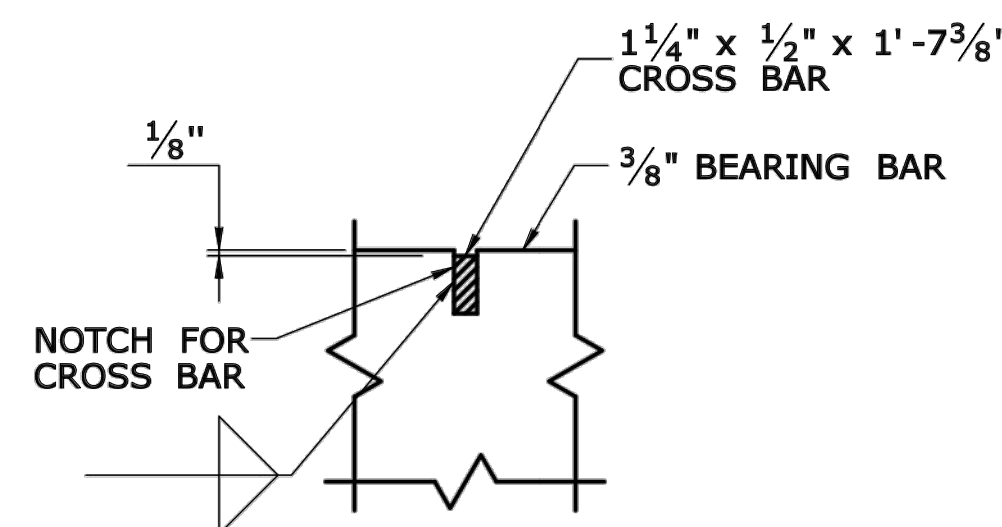


NOTE:
 1/2" DIA. ROUND BAR SHALL CONTACT BEARING BAR AT BOTTOM AND BE FLUSH AT TOP.

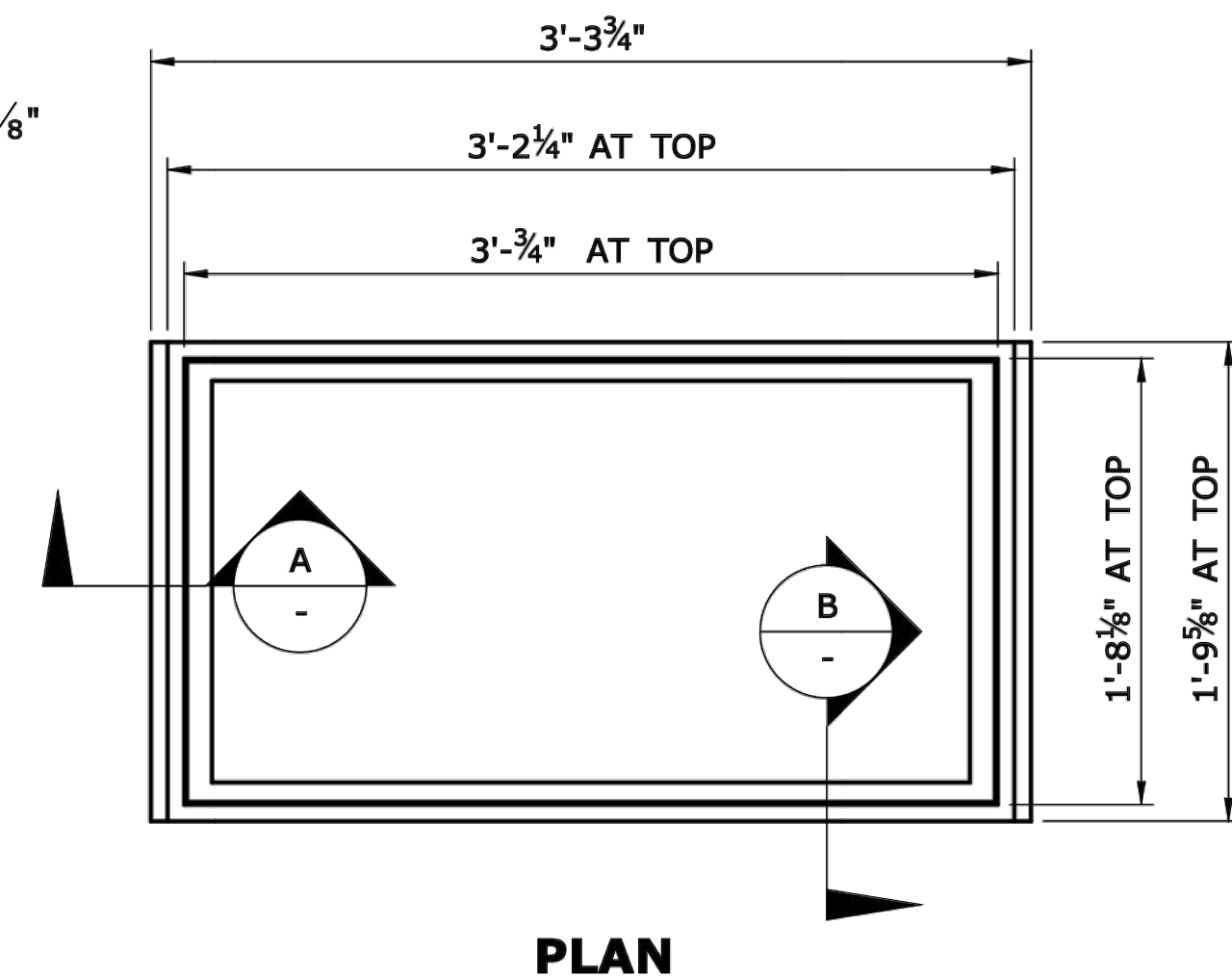
**ROUND BAR ATTACHMENT
 CATCH BASIN GRATE TYPE A**



**END TRANSVERSE BAR ATTACHMENT
 CATCH BASIN GRATE TYPE A AND B**

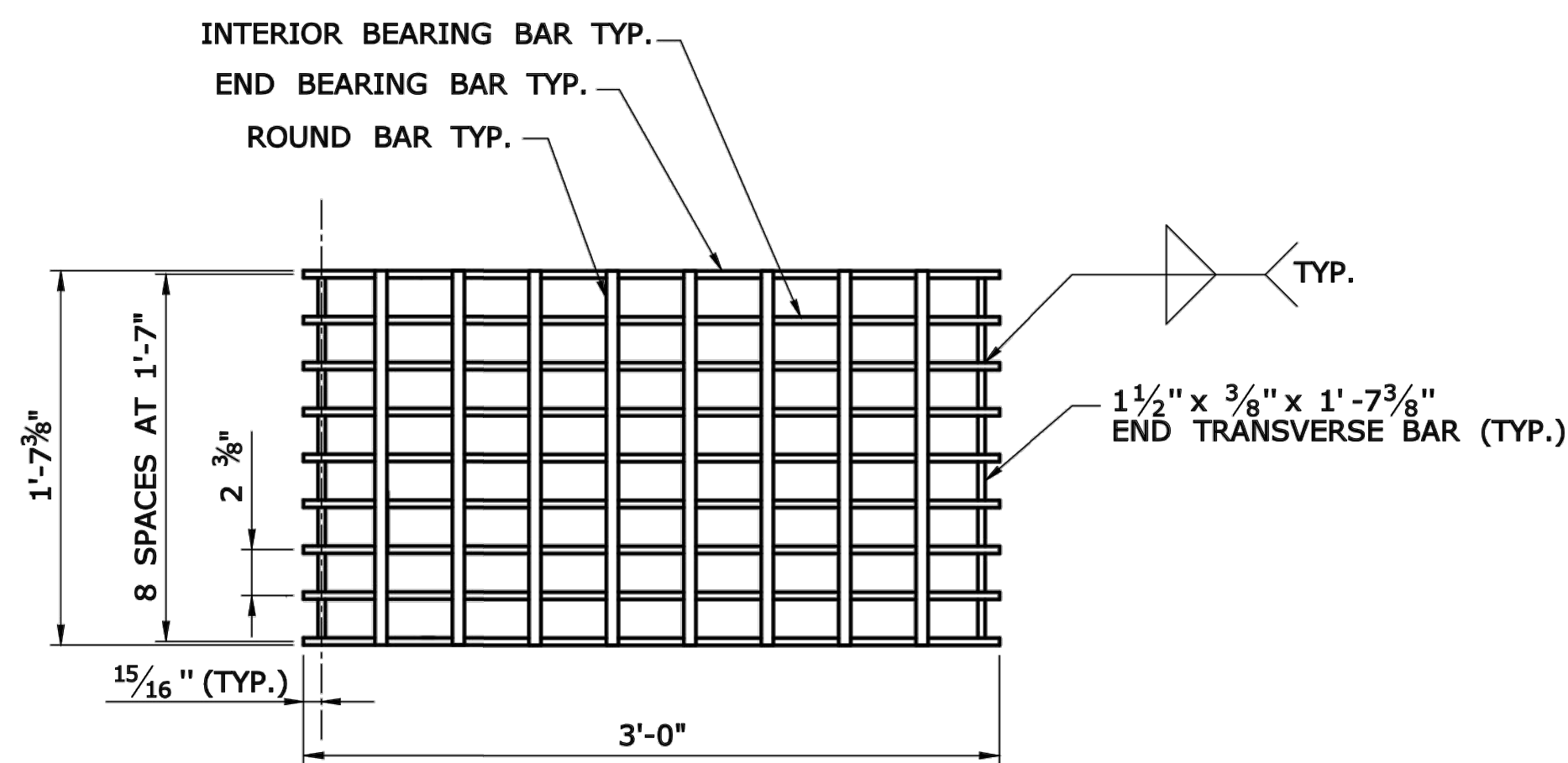


**CROSS BAR ATTACHMENT
 CATCH BASIN GRATE TYPE B**

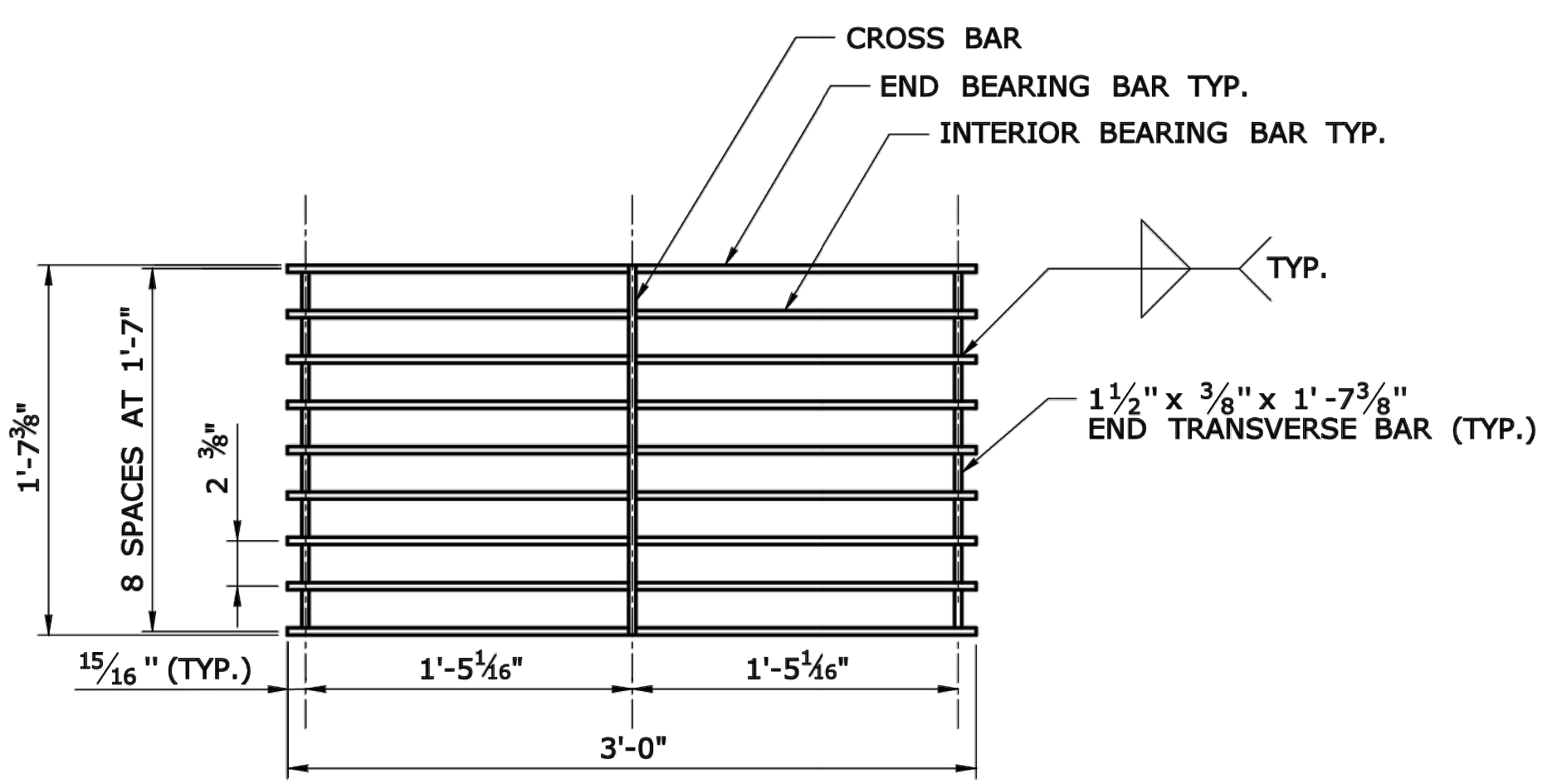


PLAN

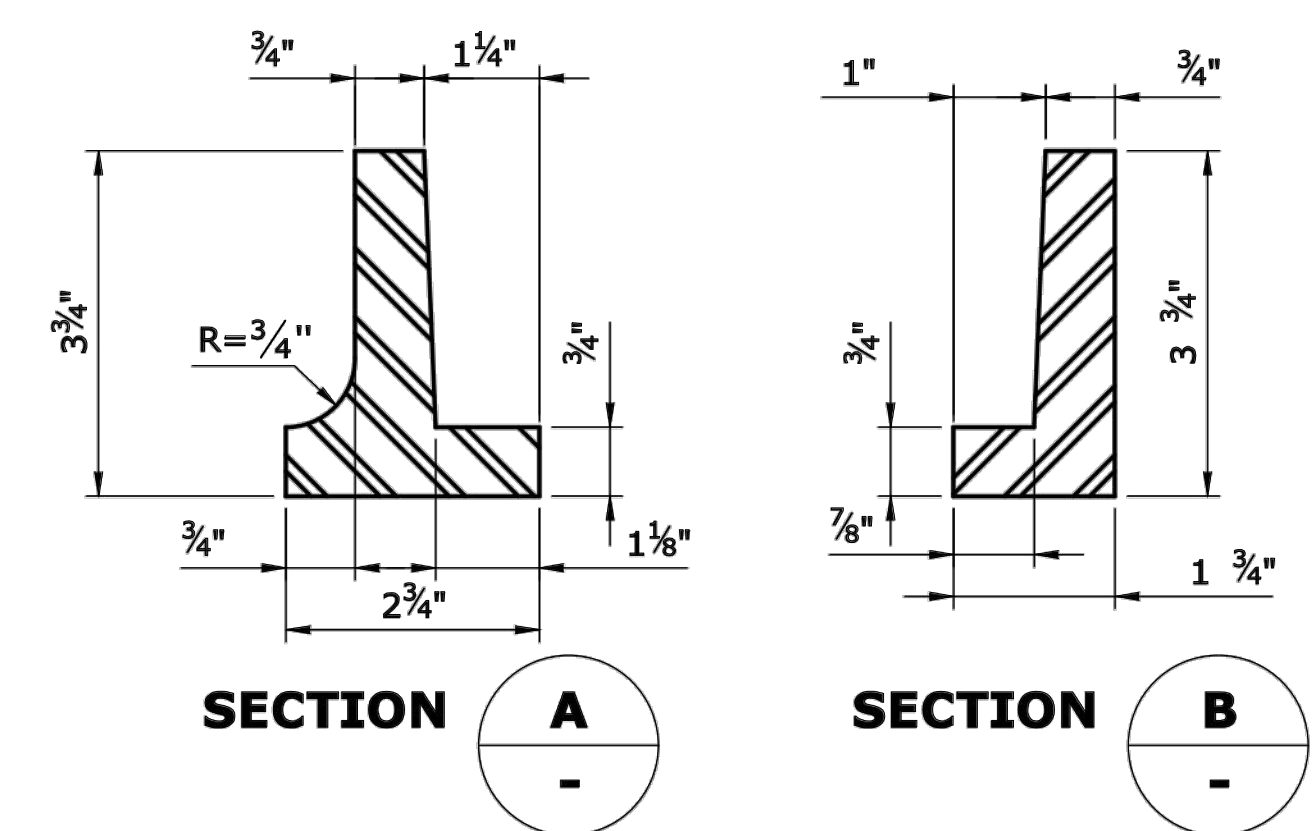
- GENERAL NOTES:**
1. STEEL OR CAST IRON SHALL BE USED FOR FRAMES. STEEL SHALL BE USED FOR TYPE "A" AND "B" GRATES.
 2. TYPE "A" GRATES SHALL BE USED ON ALL ROADWAYS WHERE BICYCLE TRAFFIC IS ALLOWED OR ON HEAVY DUTY LOCK DOWN TOPS AS DIRECTED BY THE ENGINEER.
 3. TYPE "B" GRATES SHALL BE USED ON ALL LIMITED ACCESS HIGHWAYS, RAMPS AND WHERE BICYCLE TRAFFIC IS NOT ALLOWED OR AS DIRECTED BY THE ENGINEER.
 4. DO NOT GALVANIZE CAST IRON FRAMES.
 5. DIMENSIONAL TOLERANCES SHALL BE $\pm 1/16$ INCH.
 6. ALL STEEL BARS SHALL BE WELDED AT ALL INTERSECTIONS.



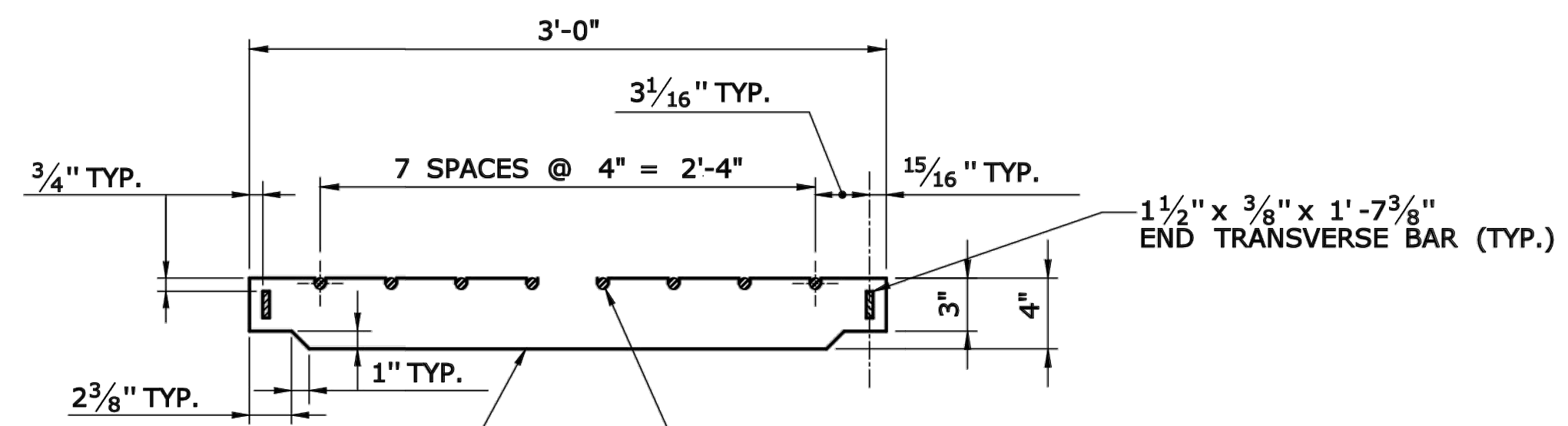
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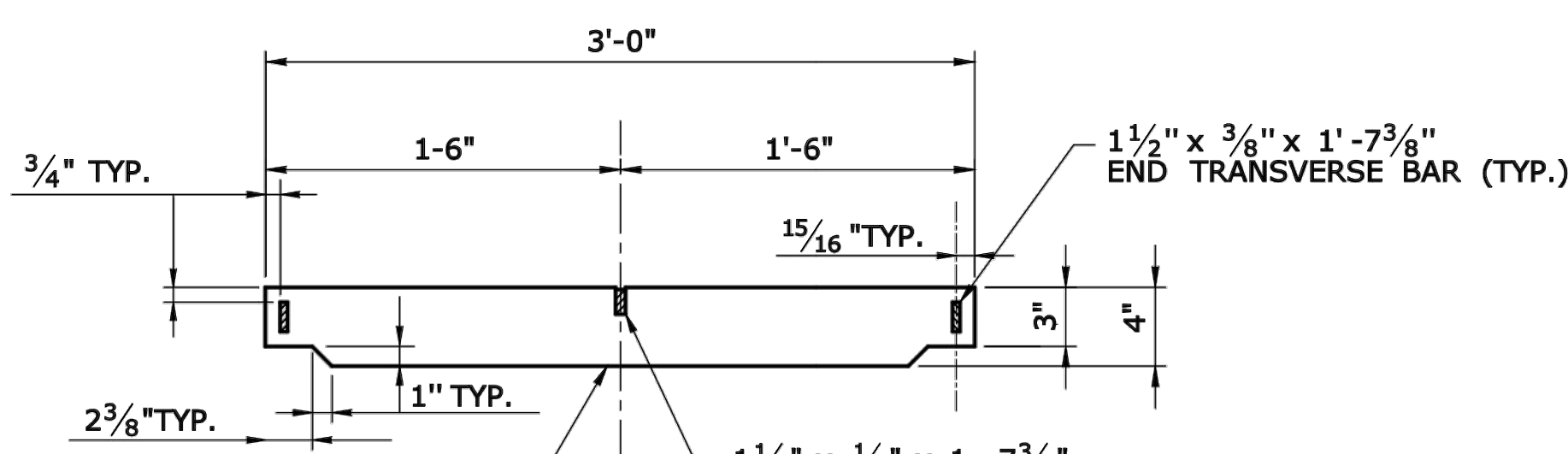
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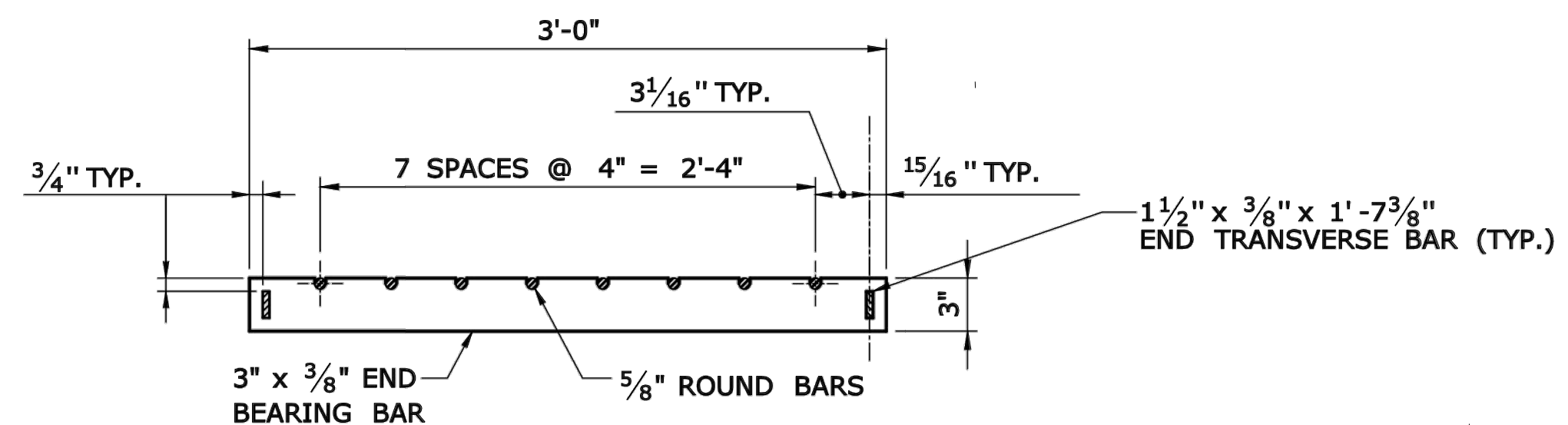
**SECTION A SECTION B
 CAST IRON FRAME ALTERNATE**



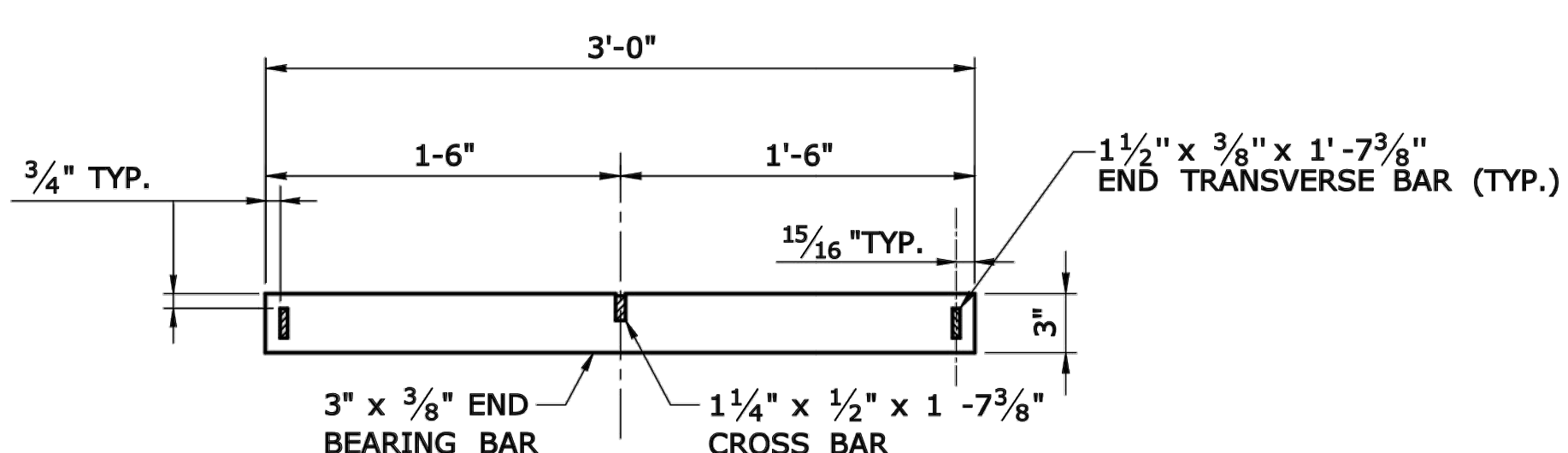
**ELEVATION- INTERIOR BEARING BAR
 CATCH BASIN GRATE TYPE A**



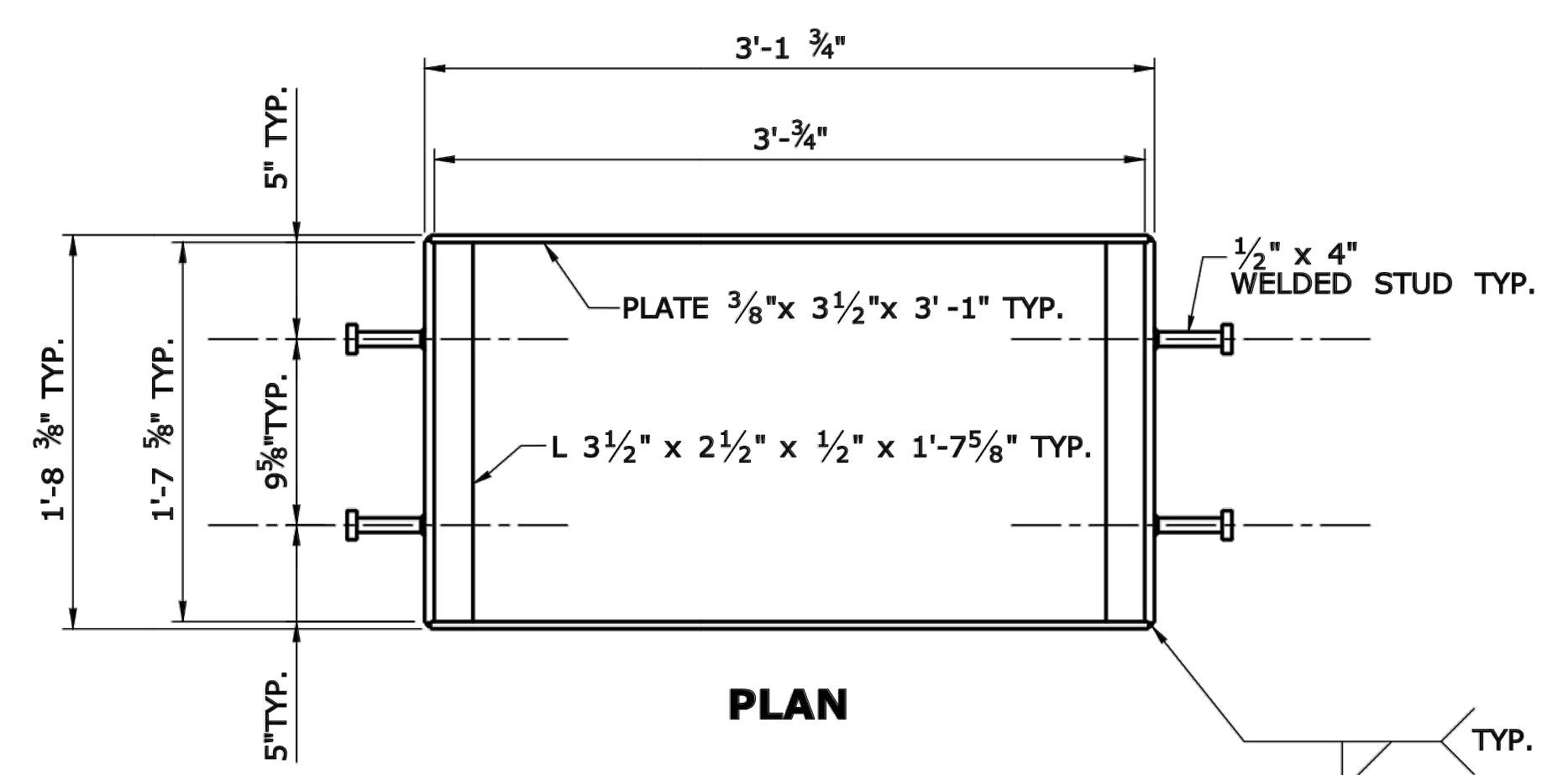
**ELEVATION- INTERIOR BEARING BAR
 CATCH BASIN GRATE TYPE B**



**ELEVATION- END BEARING BAR
 CATCH BASIN GRATE TYPE A**



**ELEVATION- END BEARING BAR
 CATCH BASIN GRATE TYPE B**



**WELDED STUD ANCHOR DETAILS
 STEEL FRAME**

**BROOKFIELD STREETSCAPE PHASE II
 ROUTE 202 (FEDERAL ROAD)
 BROOKFIELD, CONNECTICUT**

FREEMAN COMPANIES
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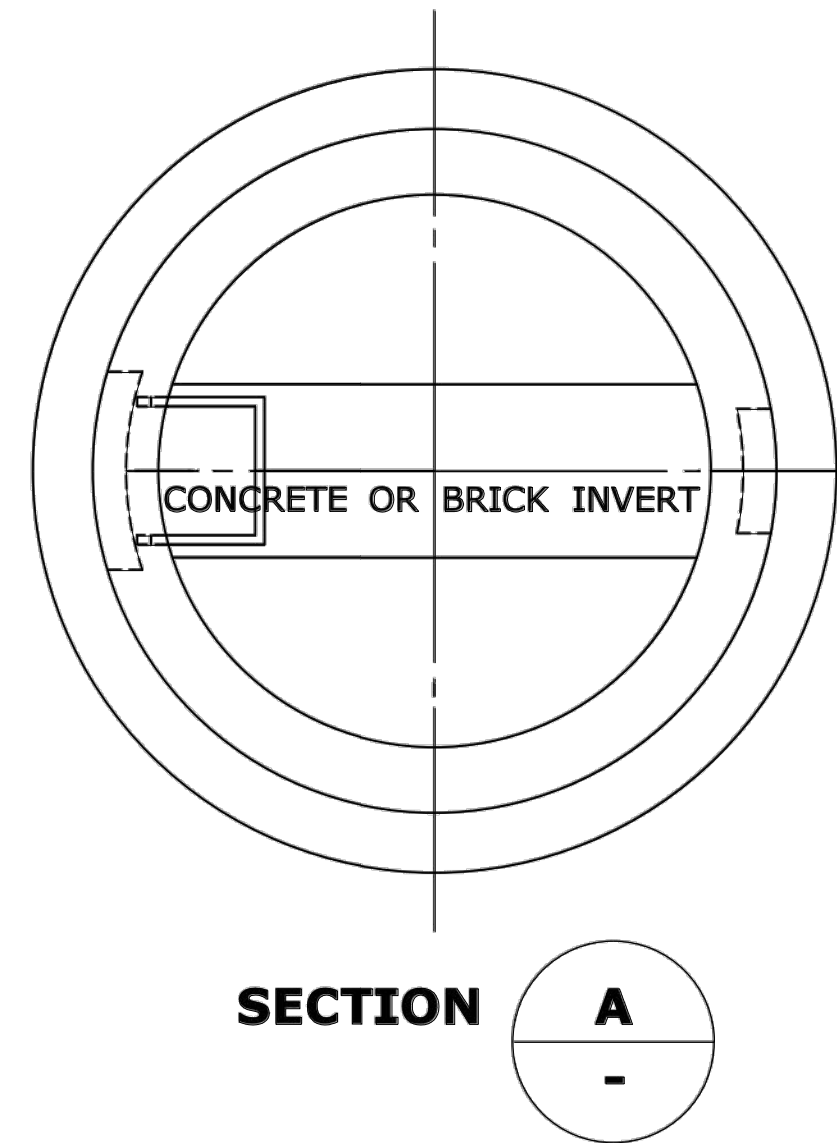
11/16/2017 10:10 AM NO. 23422

DESIGNED:	YL	
DRAFTED:	PT	
CHECKED:	RG	
APPROVED:		
SCALE:	N.T.S.	
PROJECT NO.:	2017-0605	
DATE:	01/16/2019	
FILE:	HWL_MST_2017_0605_MDS	
NO.	DATE	DESCRIPTION
REVISIONS		

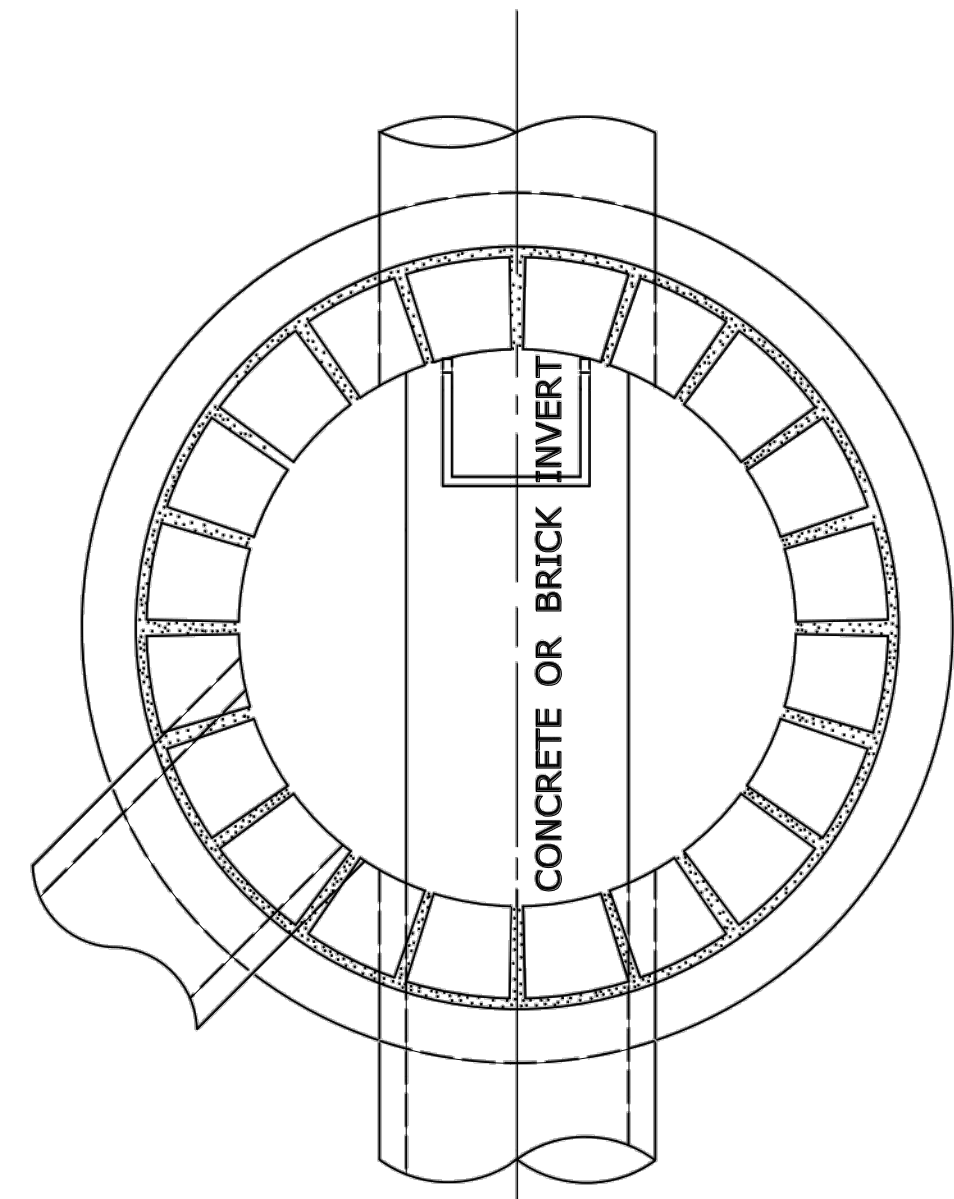
TITLE:	CATCH BASIN FRAMES AND GRATES
SHEET NUMBER:	MDS-7

Freeman Companies, LLC - R: 2017/2017-0605 Brookfield Streetscape Phase 2.DWG/VHM_MST_2017_0605_MDS.dwg, Jun 21, 2019-3:30pm Plotted By: plikouri

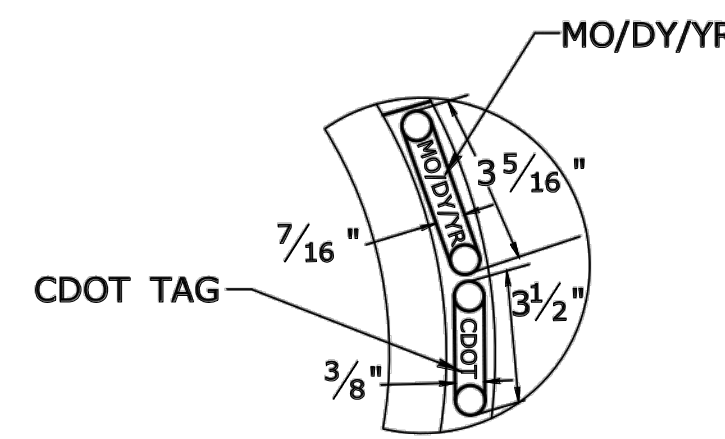
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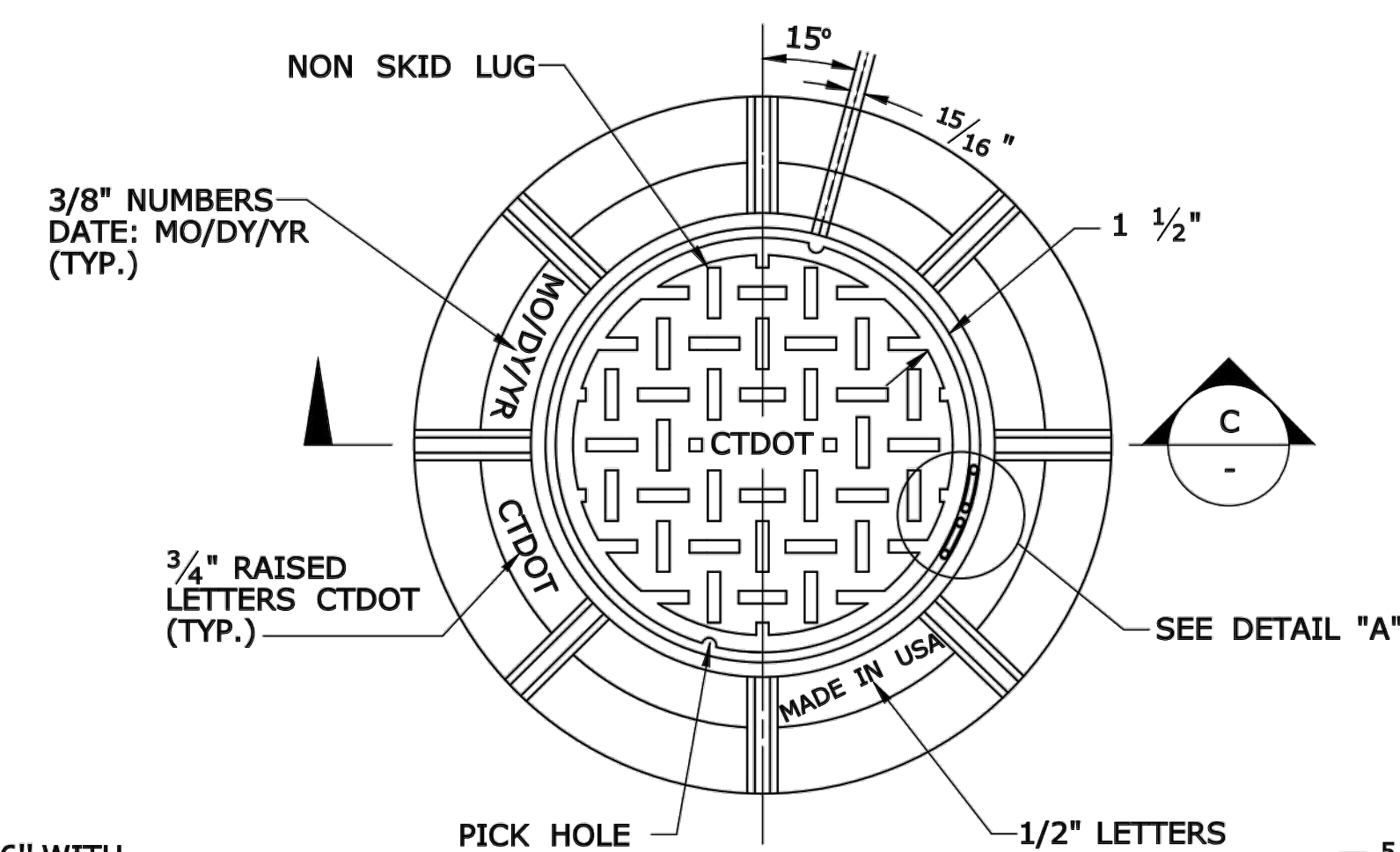
SECTION A



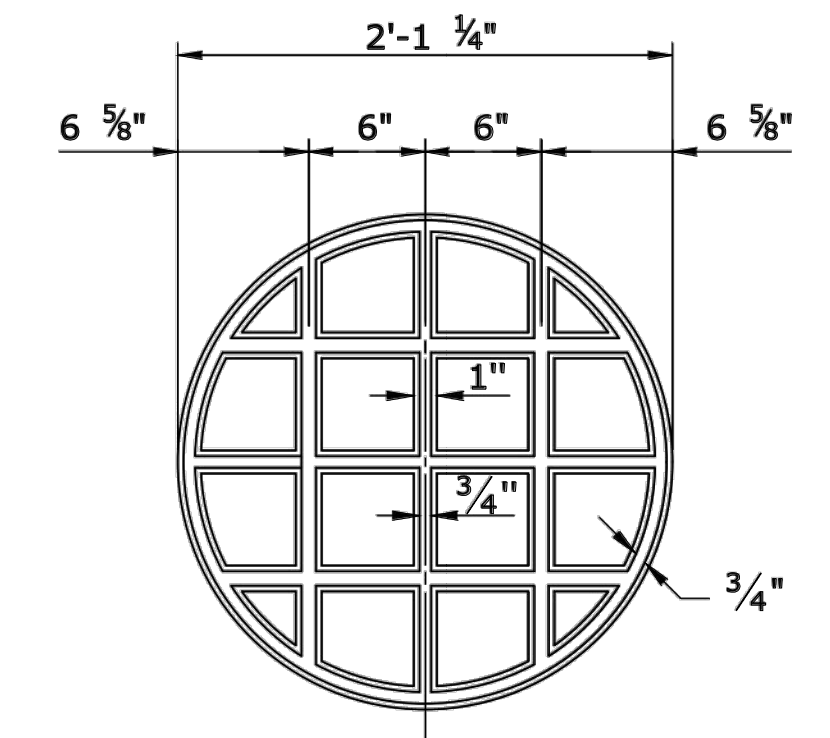
SECTION B



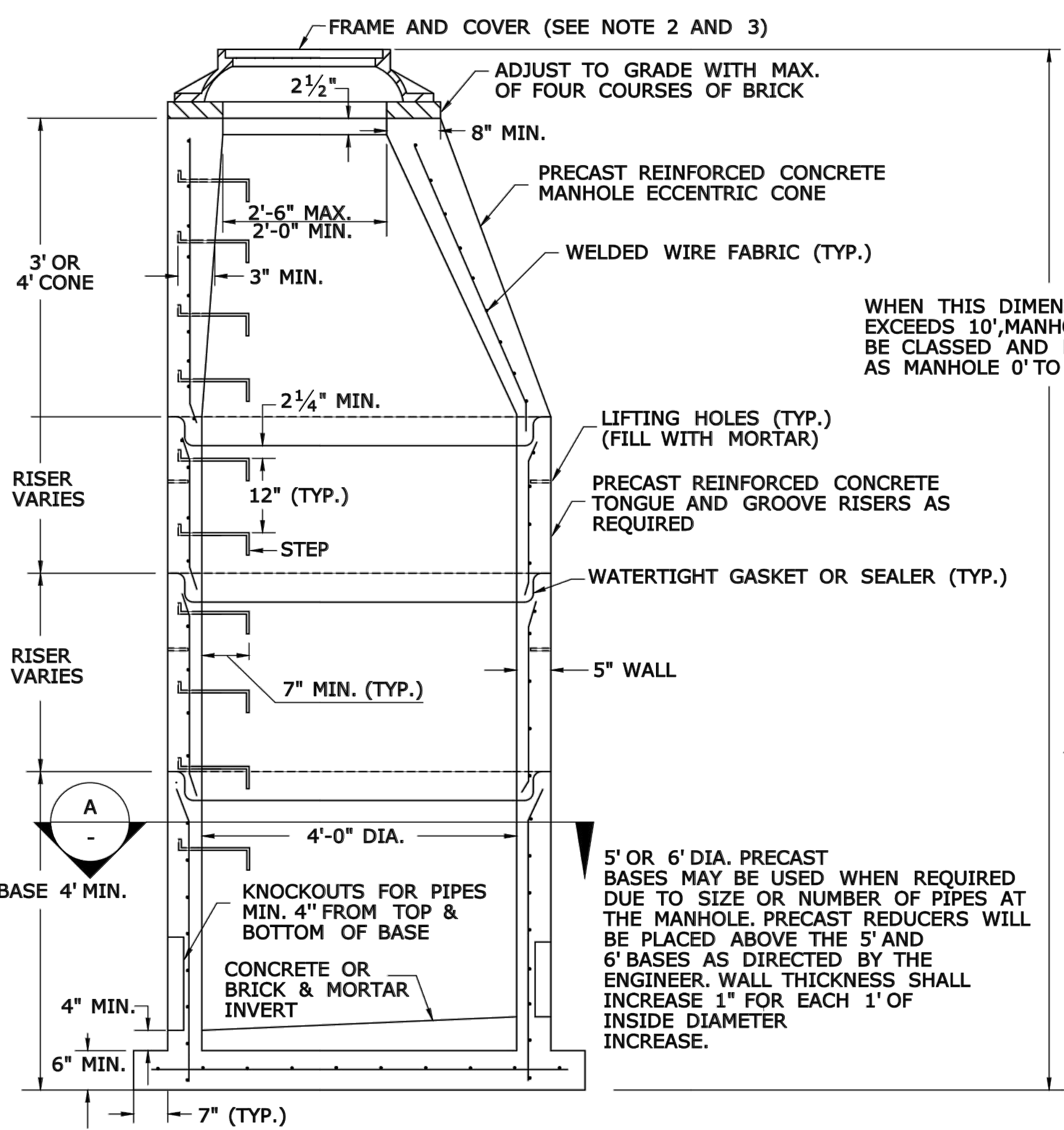
DETAIL "A"



PLAN



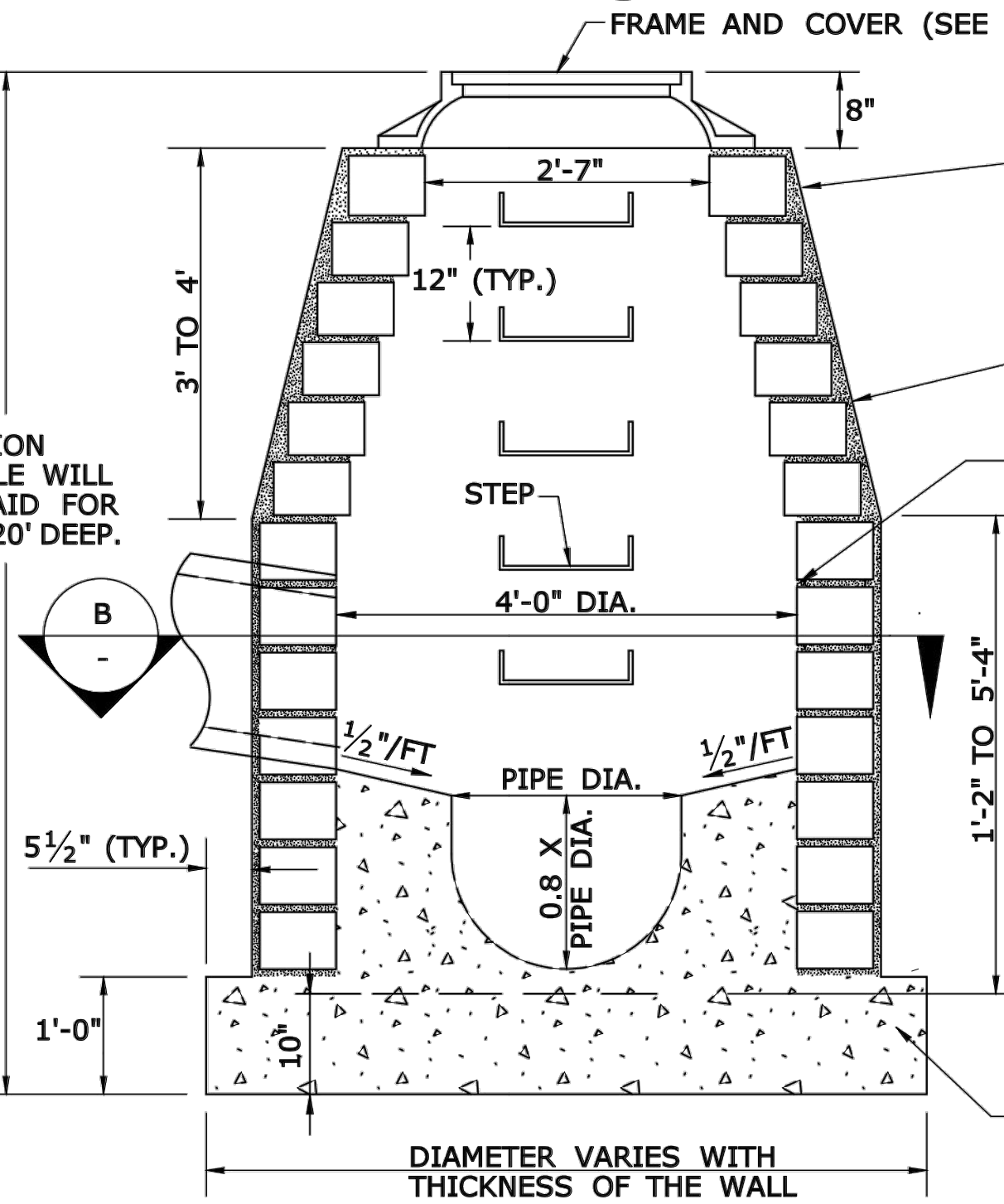
UNDERSIDE OF COVER



ELEVATION

MANHOLE

(REINFORCED PRECAST CONCRETE UNIT)



ELEVATION

MANHOLE

MASONRY CONCRETE UNIT OR CLASS "A" CONCRETE

WALL SHALL BE A MIN. OF 6" WITH MASONRY CONCRETE UNITS. CLASS "A" CONCRETE WALL SHALL BE 12" THICK WHEN DEPTH OF MANHOLE IS GREATER THAN 10' DEEP.

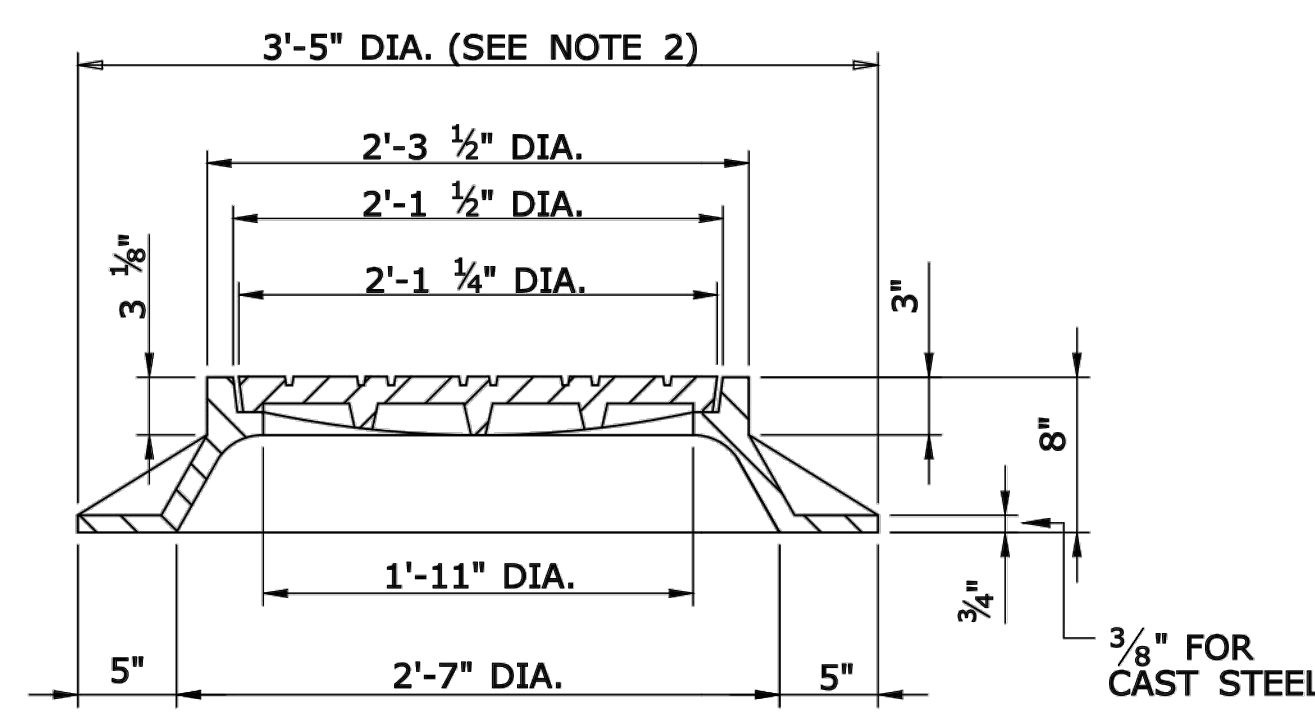
MASONRY WALLS SHALL BE PLASTERED OUTSIDE WITH 2:1 CEMENT MORTAR 1/2" THICK. MASONRY MUST BE WET WHEN MORTAR IS APPLIED.

ALL JOINTS SHALL BE POINTED FLUSH AND FULL

WALLS SHALL BE BUILT OF MASONRY CONCRETE UNITS OR CLASS "A" CONCRETE AT THE OPTION OF THE CONTRACTOR.

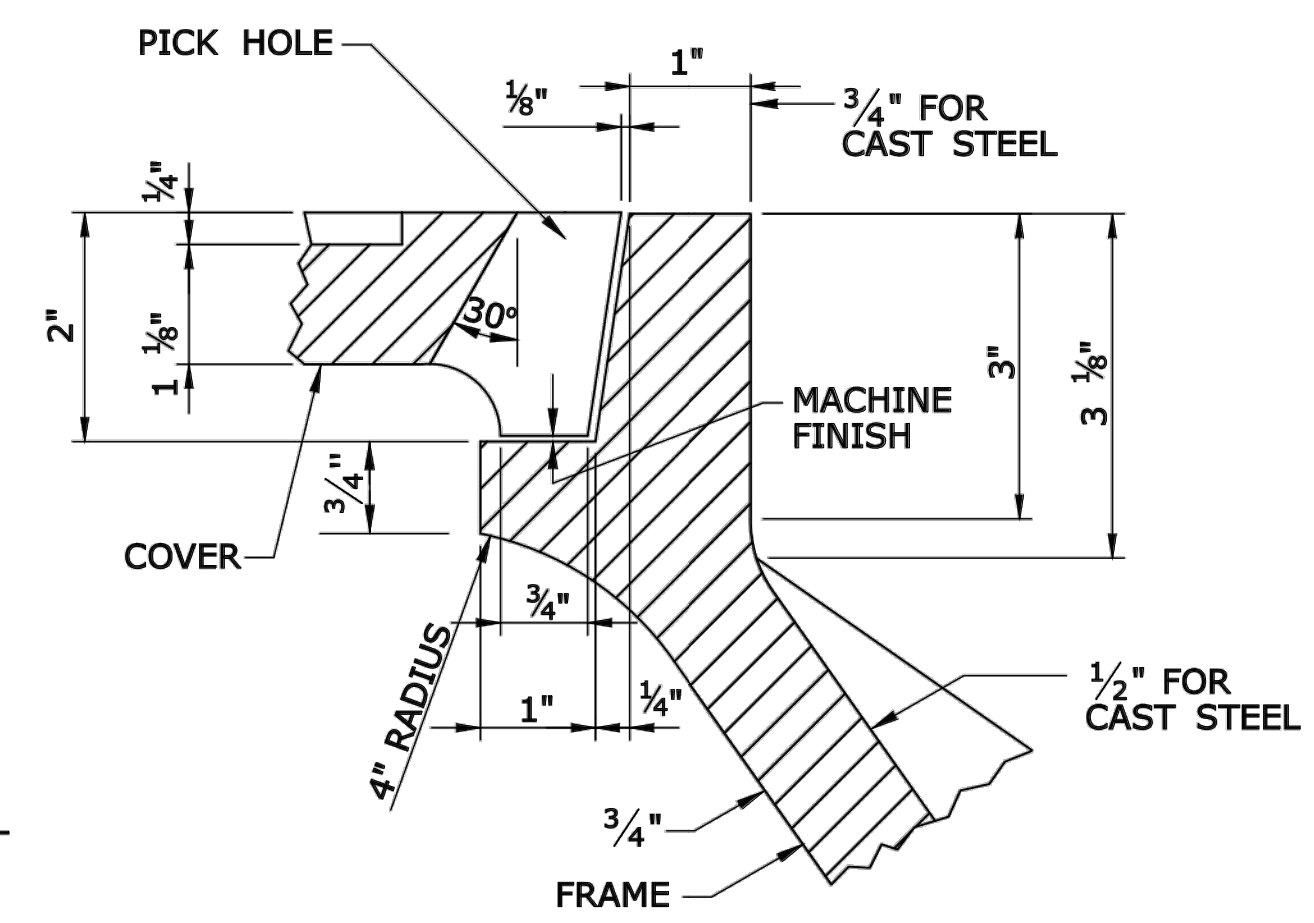
MASONRY CONCRETE UNITS SHALL BE LAID IN CEMENT SAND MORTAR 1:2 MIX. JOINTS SHALL NOT BE OVER 1/2" ON INSIDE FACE

NON SKID LUG



SECTION C

FRAME AND COVER



FRAME SEAT

GENERAL NOTES:

1. CHANNELS MAY BE SHAPED IN CONCRETE BASE OF MANHOLE OR FORMED USING BRICK OR MASONRY.
2. A FRAME DIAMETER OF 3'-3" WITH 4" FLANGE MUST BE USED WHEN THE TOP DIAMETER OF THE PRECAST CONE IS LESS THAN 3'-6". ALL OTHER FRAME DIMENSIONS SHALL REMAIN THE SAME.
3. CAST IRON COVER OR STEEL COVER SHALL WEIGH NO LESS THAN 134 LBS.
4. ALL DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES.

Freeman Companies, LLC - R:\2017\2017-0605_Brookfield Streetscape Phase 2\DWG\HW_MST_2017_0605_MDS.dwg, Jun 21, 2019 - 3:30pm Plotted By: plikhuri

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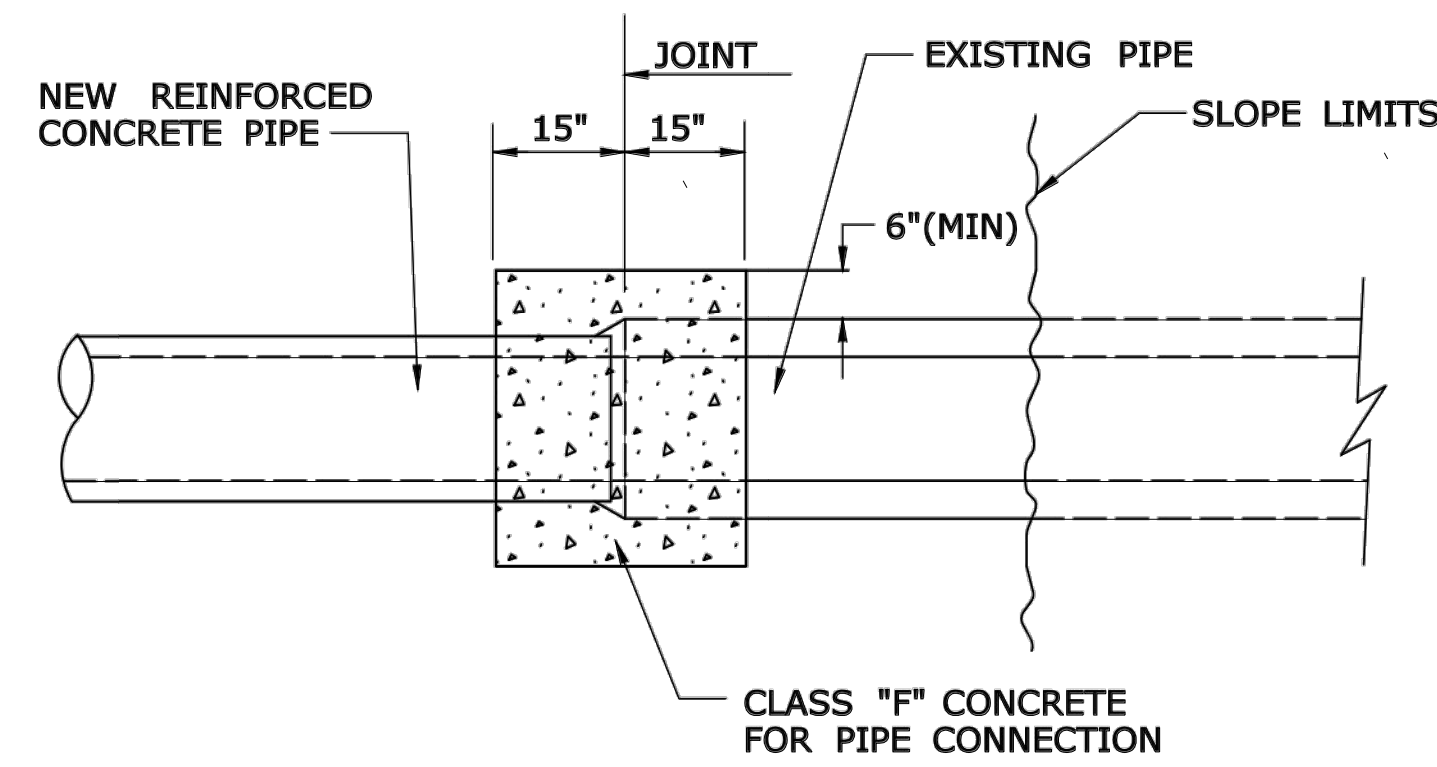
15YANG UN, PE, P10X NO. 23422

**BROOKFIELD STREETScape PHASE II
 ROUTE 202 (FEDERAL ROAD)
 BROOKFIELD, CONNECTICUT**

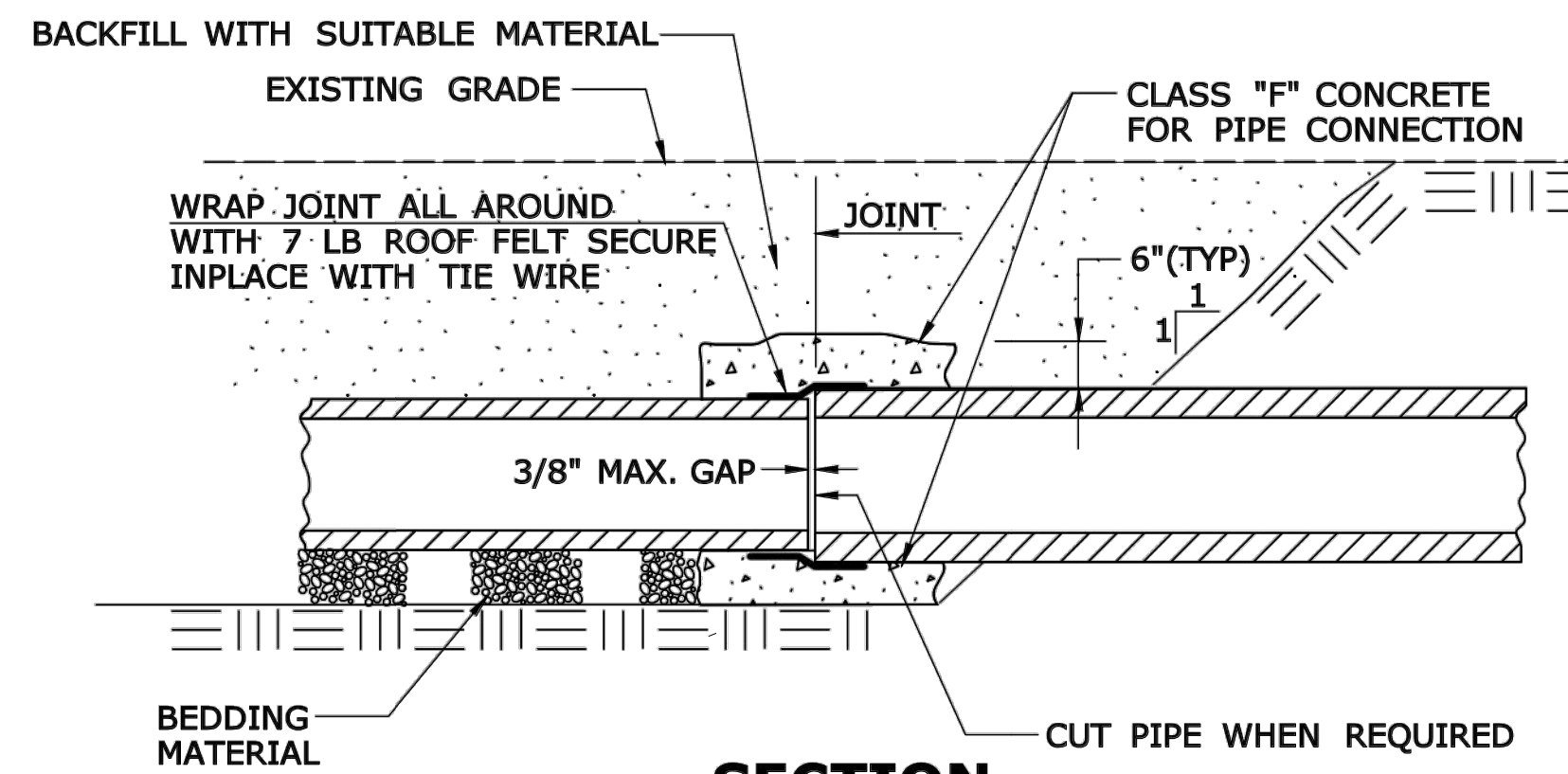
DESIGNED:	YL	
DRAFTED:	PT	
CHECKED:	RG	
APPROVED:		
SCALE:	N.T.S.	
PROJECT NO.:	2017-0605	
DATE:	01/16/2019	
FILE:	HW_MST_2017_0605_MDS	
NO.	DATE	DESCRIPTION
REVISIONS		

TITLE:	MANHOLE AND COVER
SHEET NUMBER:	MDS-8

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PLAN



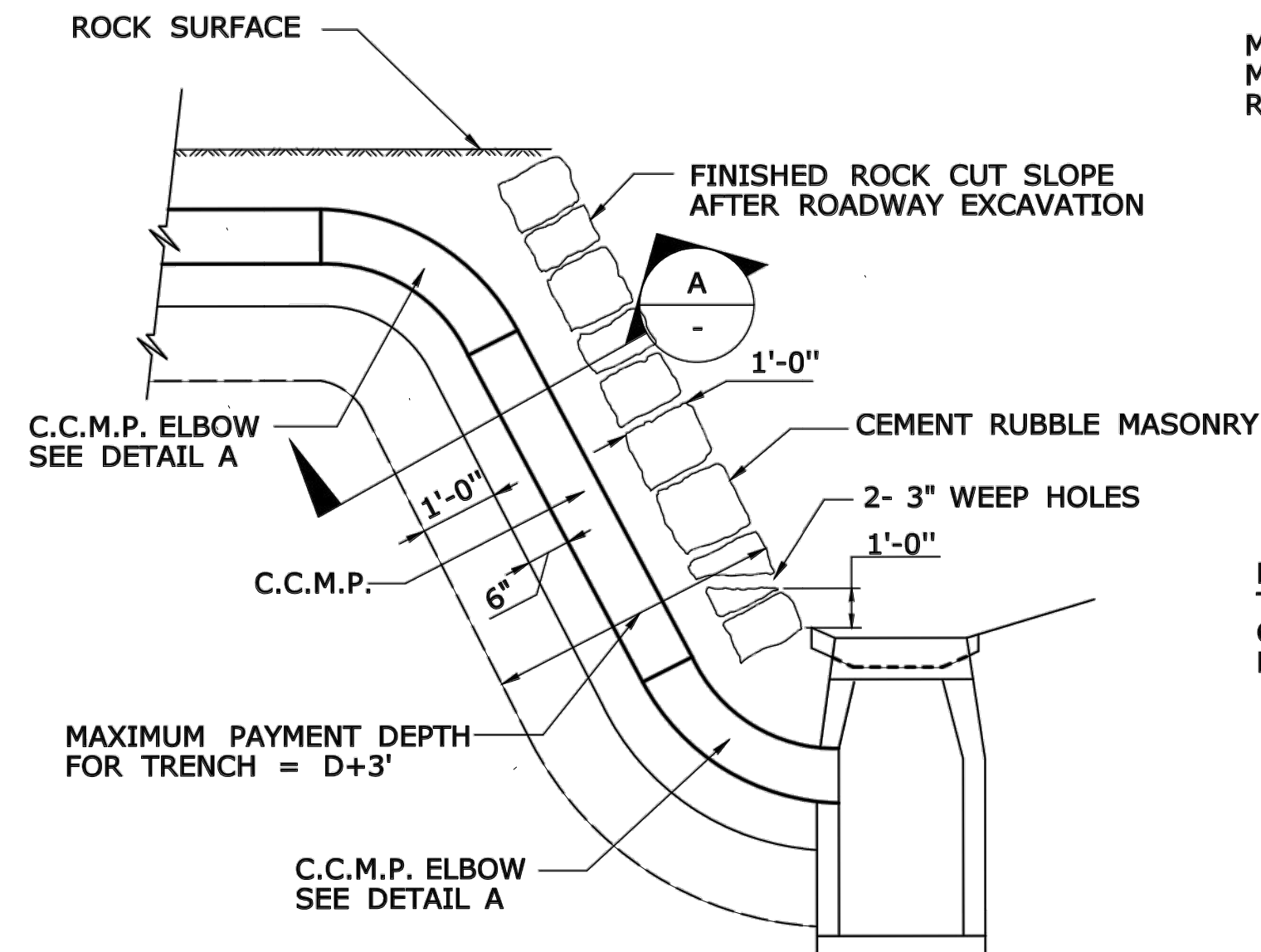
**SECTION
CONCRETE PIPE CONNECTION**

NOTES:

- "CONCRETE PIPE CONNECTION" IS INTENDED FOR USE WHERE A REINFORCED CONCRETE PIPE REPAIR OR MODIFICATION IS NEEDED SOMEWHERE WITHIN A PIPE RUN WHERE A BELL/SPIGOT JOINT CANNOT BE ACHIEVED.
- MAINTAIN INTERIOR ALIGNMENT OF PIPE AT JOINTS UNTIL CONCRETE IS PROPERLY CURED.
- BACKFILL OF PIPE REPAIR WITH SUITABLE MATERIAL MAY NOT TAKE PLACE UNTIL CONCRETE IS PROPERLY CURED.
- CONTRACTOR SHALL MAINTAIN LINE AND GRADE OF PIPE REPAIR OR MODIFICATION BY METHODS APPROVED BY THE ENGINEER.
- HOLES OR GAPS AT JOINT LARGER THAN 3/8" SHALL BE FILLED OR WRAPPED TO PREVENT CONCRETE FROM ENTERING PIPE.

GENERAL NOTES:

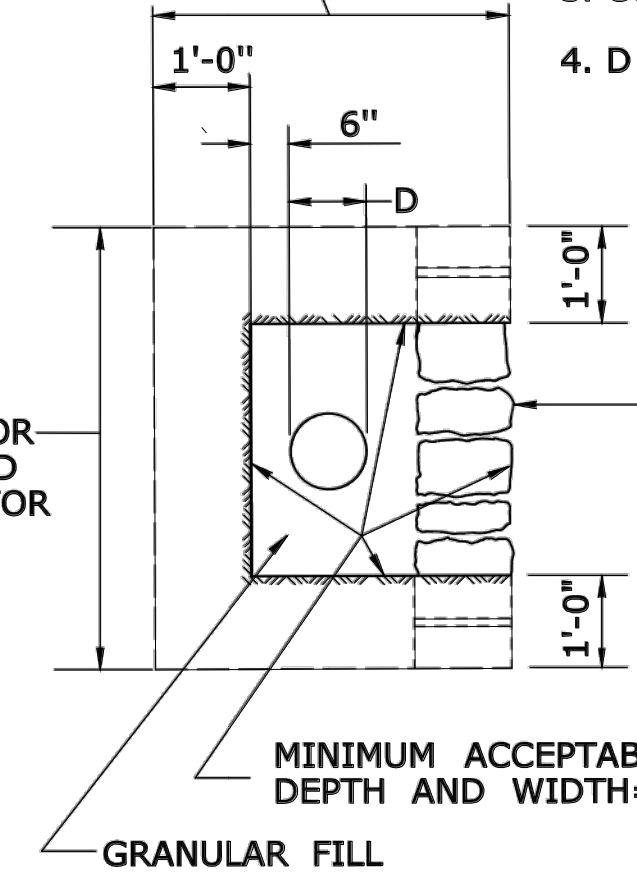
- ROCK REMOVED BEYOND THE MAXIMUM LIMIT SHOWN SHALL BE REPLACED WITH CEMENT RUBBLE MASONRY AND GRANULAR FILL.
- FILL, AS REQUIRED TO CLOSE THE OPENING AS SHOWN ON THE PLANS, WILL BE AT THE CONTRACTOR'S EXPENSE. HOWEVER, THE PAY LIMIT LINES MAY BE MODIFIED TO COINCIDE WITH NATURAL FAULTS OR FISSURES OF ROCK AS THE ENGINEER MAY DETERMINE.
- COATED CORRUGATED METAL PPE (C.C.M.P.).
- D = PIPE DIAMETER.



TYPICAL INSTALLATION OF C.C.M.P. IN ROCK SLOPE

MAXIMUM DEPTH FOR TRENCH = D+3'
MAXIMUM GRANULAR FILL = D+2' FOR ROCK ACTUALLY REMOVED.

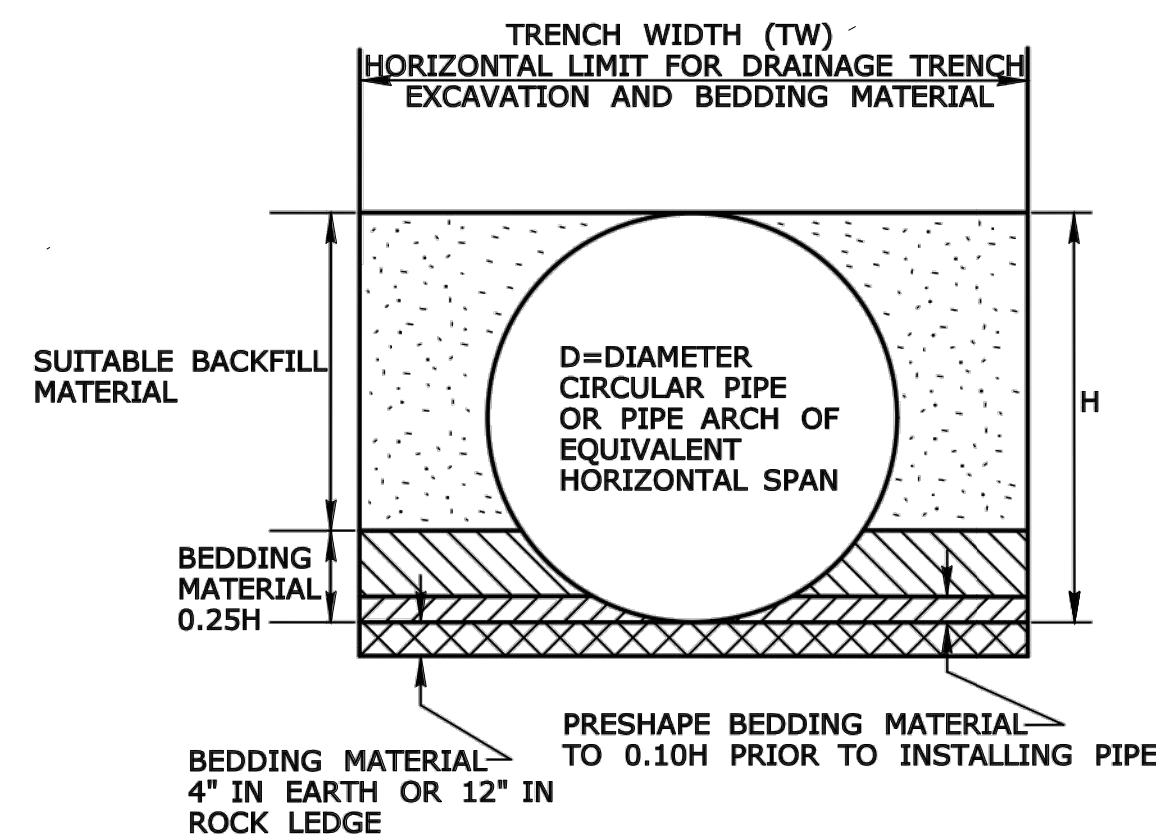
MAXIMUM WIDTH = D+4' FOR TRENCH, GRANULAR FILL, AND CEMENT RUBBLE MASONRY FOR ROCK ACTUALLY REMOVED.



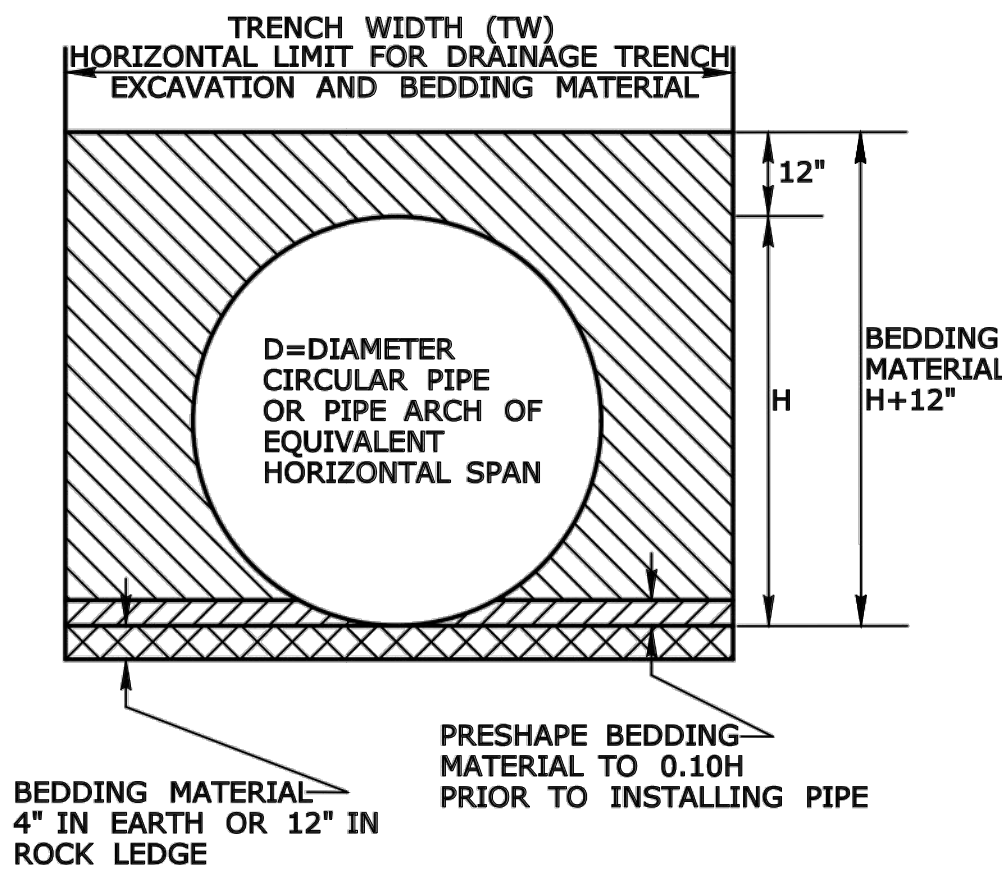
SECTION A

1'-0" CEMENT RUBBLE MASONRY FOR FULL WIDTH OF TRENCH OPENED. THE CEMENT RUBBLE MASONRY SHALL BE COMPOSED OF ROCK OF THE SAME APPEARANCE AS, OR SIMILAR TO THE ADJACENT ROCK CUT.

MINIMUM ACCEPTABLE DIMENSIONS FOR DEPTH AND WIDTH = D+2' (EACH)



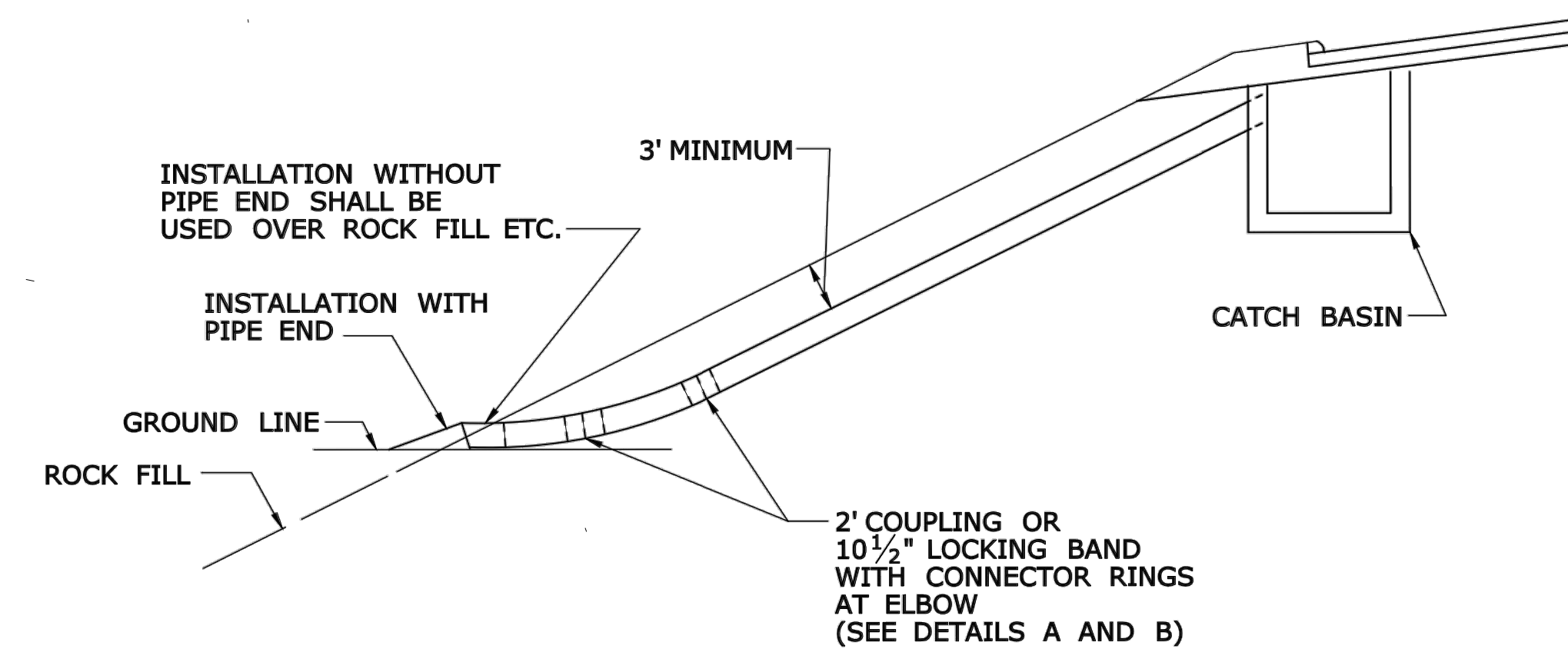
PIPE TRENCH FOR PIPES LESS THAN 48"



PIPE TRENCH FOR PIPES GREATER THAN OR EQUAL TO 48"

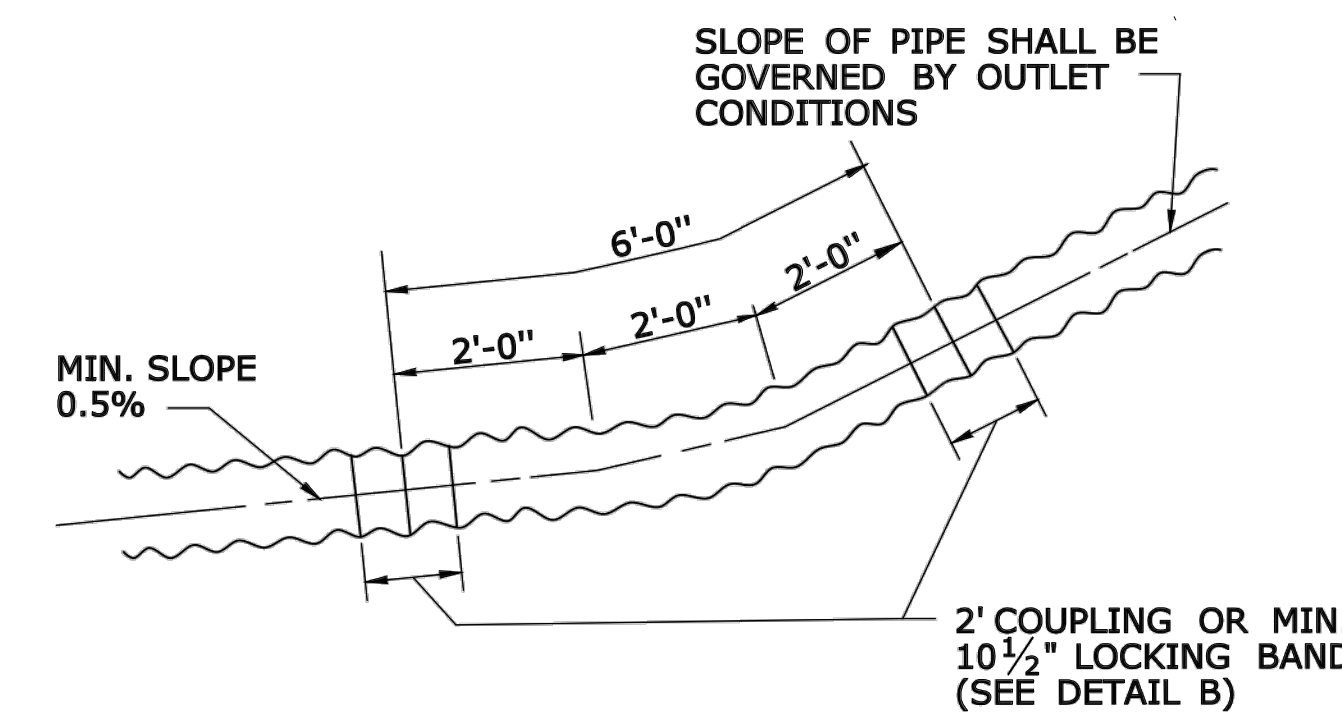
TRENCH WIDTH (TW) CHART

PIPE, PIPE-ARCH, OR DRAINAGE STRUCTURE	TRENCH WIDTH
PIPE OR PIPE-ARCH WITH NOMINAL INSIDE HORIZONTAL SPAN LESS THAN 30"	2' GREATER THAN NOMINAL INSIDE HORIZONTAL SPAN
PIPE OR PIPE-ARCH WITH NOMINAL INSIDE HORIZONTAL SPAN GREATER THAN OR EQUAL TO 30"	3' GREATER THAN NOMINAL INSIDE HORIZONTAL SPAN
PIPE OR PIPE-ARCH FABRICATED FROM STRUCTURAL PLATES	4' GREATER THAN NOMINAL INSIDE HORIZONTAL SPAN
DRAINAGE STRUCTURES	2' BEYOND ALL EXTERIOR OR FOUNDATION WALLS

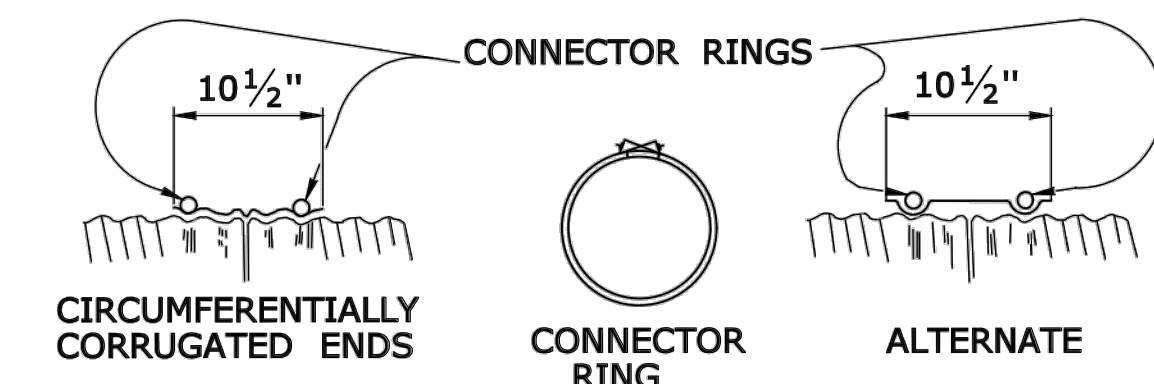


TYPICAL INSTALLATION OF C.C.M.P. ELBOW IN FILL SLOPE

PIPE DIAMETER	LENGTH OF RING
12"	52"
15"	61"
18"	71"
21"	80"
24"	90"
30"	108"
36"	128"
42"	147"
48"	166"



**DETAIL A
C.C.M.P. ELBOW AND COUPLING**



**DETAIL B
ELBOW DIMENSIONS**

RODS: 7/16" DIAMETER ELECTRO-GALVANIZED WITH 6" LENGTH OF 1/2" ROLLED THREADS EACH END, FURNISHED CURVED, TO FIT PIPE. SEE TABLE C

LUGS: DOUBLE TAKE UP, CAST IRON, ELECTRO-GALVANIZED.

NOTE: THE COUPLER FASTENING DEVICE SHALL NOT INTERFERE WITH INSTALLATION OF CONNECTOR RINGS.

Freeman Companies, LLC - R:\2017\2017-0605 Brookfield Streetscape Phase 2\DWG\HW_MST_2017_0605_MDS.dwg, Jun 21, 2019 3:31pm Plotted By: plakuri



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OWNER FOR

TOWN OF BROOKFIELD
100 POCONO ROAD
BROOKFIELD,
CONNECTICUT 06804

TSYANG LIN, PE, PTOE NO. 23422

**BROOKFIELD STREETScape PHASE II
ROUTE 202 (FEDERAL ROAD)
BROOKFIELD, CONNECTICUT**

DESIGNED:	YL	
DRAFTED:	PT	
CHECKED:	RG	
APPROVED:		
SCALE:	N.T.S.	
PROJECT NO.:	2017-0605	
DATE:	01/16/2019	
FILE:	HW_MST_2017_0605_MDS	
NO.	DATE	DESCRIPTION
REVISIONS		

TITLE: C.C.M. PIPE
INSTALLATION & PIPE
TRENCH

SHEET NUMBER:
MDS-9

D1 - SERIES	D3 - SERIES	D4 - SERIES		D5 - SERIES	D7 - SERIES		D9 - SERIES	D10 - SERIES	RECREATIONAL RS - SERIES	E5 - SERIES	I - SERIES	INCIDENT MANAGEMENT
	Variable Road Name				Variable	Variable					(Variable) River	
<p>51-5202 Variable</p> <p>51-5203 Variable</p>												
VARIABLE LEGEND & ARROW DIRECTION AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS ALUM. THK.	AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS ALUM. THK.	AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS ALUM. THK.	AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS ALUM. THK.	AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS ALUM. THK.	AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS ALUM. THK.	AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS ALUM. THK.	AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS ALUM. THK.	AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS ALUM. THK.	AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS ALUM. THK.	AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS ALUM. THK.	AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS ALUM. THK.	AREA (SQ. FT) SIZE (INCHES) CONN. D.O.T. # POSTS ALUM. THK.

M1 - SERIES	M2 - SERIES	M3 - SERIES	M4 - SERIES	M5 - SERIES	M6 - SERIES
		NORTH	TO		
51-6662	51-6644	51-6651	51-6650	51-2690	51-2699
51-6666	51-6644	51-6652	51-6651	51-2692	51-2699
51-6667	51-6644	51-6654	51-6654	51-2693	51-2699
51-6668	51-6644	51-6655	51-6654	51-2694	51-2699
51-6669	51-6644	51-6656	51-6654	51-2695	51-2699
51-6670	51-6644	51-6657	51-6654	51-2696	51-2699
51-6671	51-6644	51-6658	51-6654	51-2697	51-2699
51-6672	51-6644	51-6659	51-6654	51-2698	51-2699
51-6673	51-6644	51-6660	51-6654	51-2699	51-2699
51-6674	51-6644	51-6661	51-6654	51-2700	51-2699
51-6675	51-6644	51-6662	51-6654	51-2701	51-2699
51-6676	51-6644	51-6663	51-6654	51-2702	51-2699
51-6677	51-6644	51-6664	51-6654	51-2703	51-2699
51-6678	51-6644	51-6665	51-6654	51-2704	51-2699
51-6679	51-6644	51-6666	51-6654	51-2705	51-2699
51-6680	51-6644	51-6667	51-6654	51-2706	51-2699
51-6681	51-6644	51-6668	51-6654	51-2707	51-2699
51-6682	51-6644	51-6669	51-6654	51-2708	51-2699
51-6683	51-6644	51-6670	51-6654	51-2709	51-2699
51-6684	51-6644	51-6671	51-6654	51-2710	51-2699
51-6685	51-6644	51-6672	51-6654	51-2711	51-2699
51-6686	51-6644	51-6673	51-6654	51-2712	51-2699
51-6687	51-6644	51-6674	51-6654	51-2713	51-2699
51-6688	51-6644	51-6675	51-6654	51-2714	51-2699
51-6689	51-6644	51-6676	51-6654	51-2715	51-2699
51-6690	51-6644	51-6677	51-6654	51-2716	51-2699
51-6691	51-6644	51-6678	51-6654	51-2717	51-2699
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51-6695	51-6644	51-6682	51-6654	51-2721	51-2699
51-6696	51-6644	51-6683	51-6654	51-2722	51-2699
51-6697	51-6644	51-6684	51-6654	51-2723	51-2699
51-6698	51-6644	51-6685	51-6654	51-2724	51-2699
51-6699	51-6644	51-6686	51-6654	51-2725	51-2699
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51-6701	51-6644	51-6688	51-6654	51-2727	51-2699
51-6702	51-6644	51-6689	51-6654	51-2728	51-2699
51-6703	51-6644	51-6690	51-6654	51-2729	51-2699
51-6704	51-6644	51-6691	51-6654	51-2730	51-2699
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51-6707	51-6644	51-6694	51-6654	51-2733	51-2699
51-6708	51-6644	51-6695	51-6654	51-2734	51-2699
51-6709	51-6644	51-6696	51-6654	51-2735	51-2699

NOTES:

- FOR SPECIFIC SIGN DESIGN CONTACT CONN. D.O.T., DIVISION OF TRAFFIC ENGINEERING. FOR BOLT HOLE PATTERN REFER TO FHWA PUBLICATION "STANDARD HIGHWAY SIGNS". SIGNS OF DIFFERENT DIMENSIONS TO BE ERRECTED ON THE SAME POSTS, OR SPAN/MAST ARM MOUNTED, MAY REQUIRE SPECIAL BOLT HOLE PATTERNS.
- POSTS - SEE STANDARD SHEET TR-1208.02 - "METAL SIGN POSTS AND SIGN MOUNTING DETAILS."
- POSTS SHALL BE 4 LBS./FT.
- SIGNS SHALL BE FABRICATED OF ONE CONTINUOUS PIECE OF SHEET ALUMINUM. SPLICING OF SHEET ALUMINUM WILL NOT BE ACCEPTED.

COLORS:

D - SERIES
D1, 2, 3, 4, 10 BACKGROUND-GREEN, LEGEND-WHITE
D7, RS BACKGROUND-BROWN, LEGEND-WHITE
D9 BACKGROUND-BLUE, LEGEND-WHITE
ALL OTHER D-SERIES AS NOTED

E - SERIES
BACKGROUND-GREEN, LEGEND-WHITE

I - SERIES
BACKGROUND-GREEN, LEGEND-WHITE (EXCEPT AS NOTED)
M2 - M6 SERIES
(1) BACKGROUND-BLUE, LEGEND-WHITE
(2) BACKGROUND-WHITE, LEGEND-BLACK

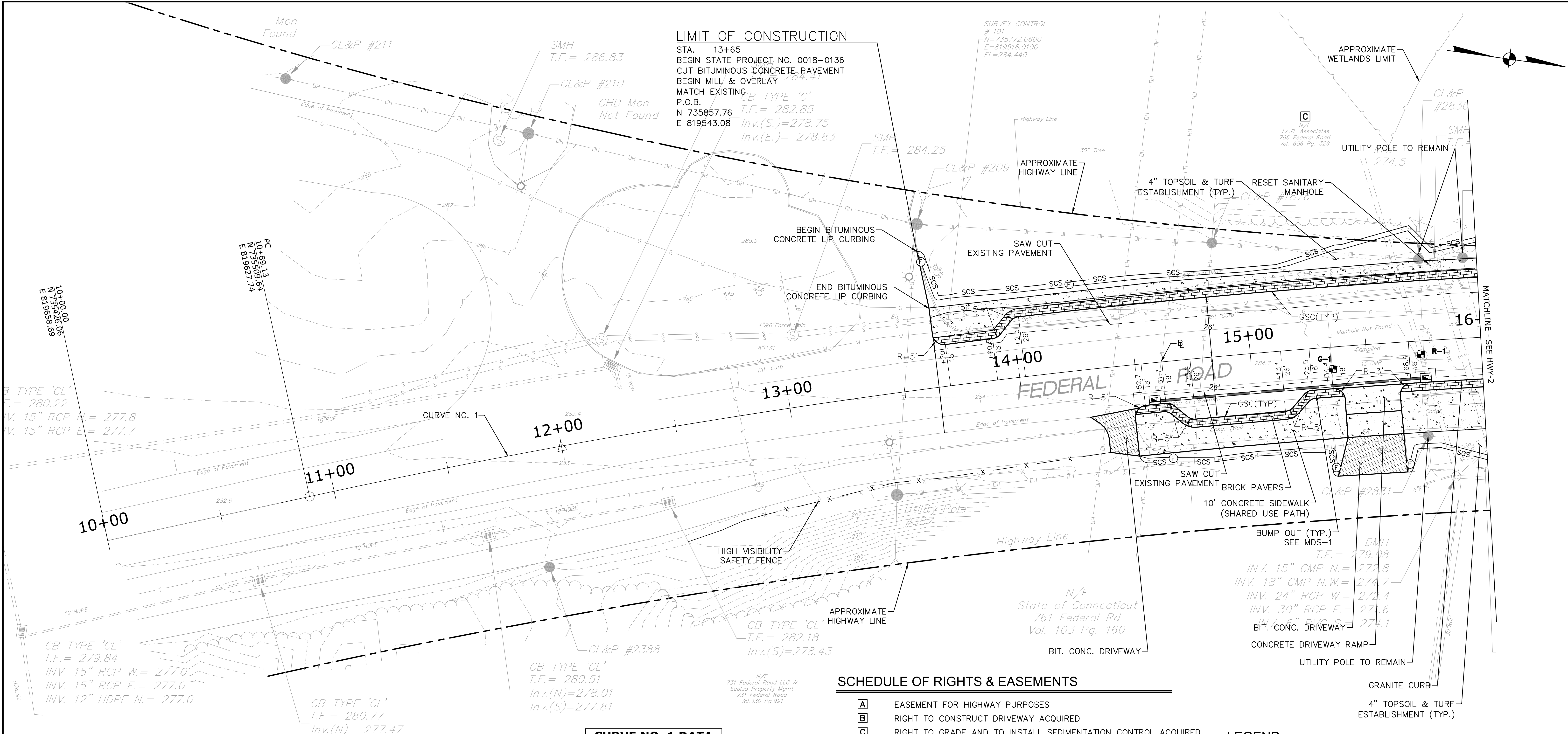
ALL COLORS SHALL BE TYPE IX RETROREFLECTIVE WITH THE EXCEPTION OF BROWN WHICH SHALL BE TYPE IV RETROREFLECTIVE AND BLACK WHICH SHALL BE OPAQUE.

* THIS DETAIL ADDED FOR THIS PROJECT ONLY.

Freeman Companies, LLC - R: 1/2017/2017-0605_MDS.dwg, Feb. 27, 2018 - 5:33pm. Printed By: pkrakur

BROOKFIELD STREETScape PHASE II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT

Freeman Companies, LLC - R:\2017\2017-0605_Brookfield Streetscape Phase 2\DWG\HWY_MST_2017-0605_HWY.dwg, Feb. 22, 2018 - 2:30pm, Plotted By: pbrakur



- NOTES**
- ALL SOIL DISTURBANCES SHALL BE TREATED WITH 4" TOPSOIL & TURF ESTABLISHMENT.
 - THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION.
 - CONTRACTOR SHALL COORDINATE WITH THE ENGINEER REGARDING THE LIMITS OF RESTORATION TO ENSURE A SMOOTH TRANSITION FROM NEW CONSTRUCTION TO EXISTING CONDITIONS.
 - CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" (CBYD) 1-800-922-4455 PRIOR TO COMMENCING CONSTRUCTION.
 - EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS OR AS DIRECTED BY THE ENGINEER.
 - CONTRACTOR SHALL COORDINATE WITH APPROPRIATE UTILITY FOR MANHOLES, GATES, BOXES AND FRAMES ETC., AFFECTED BY THE CONSTRUCTION ACTIVITIES WHICH ARE NOT IDENTIFIED AS BEING REMOVED SHALL BE RESET OR RECONSTRUCTED (AS REQUIRED) TO THE PROPER GRADE.

CURVE NO. 1 DATA

Δ = 10.6616 RIGHT
R = 3200'
T = 298.589'
L = 595.454'

ROUTE 202 (FEDERAL ROAD)

DESIGN CLASSIFICATION	DESIGN SPEED	TYPE OF ROADSIDE DEVELOPMENT	ADT
URBAN COLLECTOR STREET	35 MPH	HIGH DENSITY COMMERCIAL	9000

GAS									
TEST PIT #	BASELINE		NORTHING	EASTING	GROUND ELEVATION (FT)	INV. ELEVATION OF PIPE (FT)	TOP OF UTILITY ELEVATION (FT)	DESCRIPTION	RELOCATION ANTICIPATED
	STATION	OFFSET							
G-1	15+35	16.00 RT	735939.185	819512.349	285.10±	280.60±	281.60±	12" PIPE	NO
EXISTING MANHOLE									
R-1	15+70	14.00 RT	735979.593	819509.923	285.20±	N/A	N/A	N/A	NO

- SCHEDULE OF RIGHTS & EASEMENTS**
- A** EASEMENT FOR HIGHWAY PURPOSES
 - B** RIGHT TO CONSTRUCT DRIVEWAY ACQUIRED
 - C** RIGHT TO GRADE AND TO INSTALL SEDIMENTATION CONTROL ACQUIRED

- LEGEND**
- BIT. CONCRETE
 - CONCRETE SIDEWALK / CONCRETE DRIVEWAY APRON
 - BRICK PAVERS
 - TEST PIT
 - FILL/CUT APPROXIMATE SLOPE LIMITS
 - SEDIMENTATION CONTROL SYSTEM
 - WETLANDS
 - HIGHWAY LINE
 - EASEMENT LINE
- GRAPHIC SCALE
20 10 0 20
SCALE IN FEET

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 BROOKFIELD, CONNECTICUT 06804

OWNER FOR
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 100 POCONO ROAD
 BROOKFIELD, CONNECTICUT 06804

YUYANG LIN, PE, P102 NO. 23422

BROOKFIELD STREETScape PHASE II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT

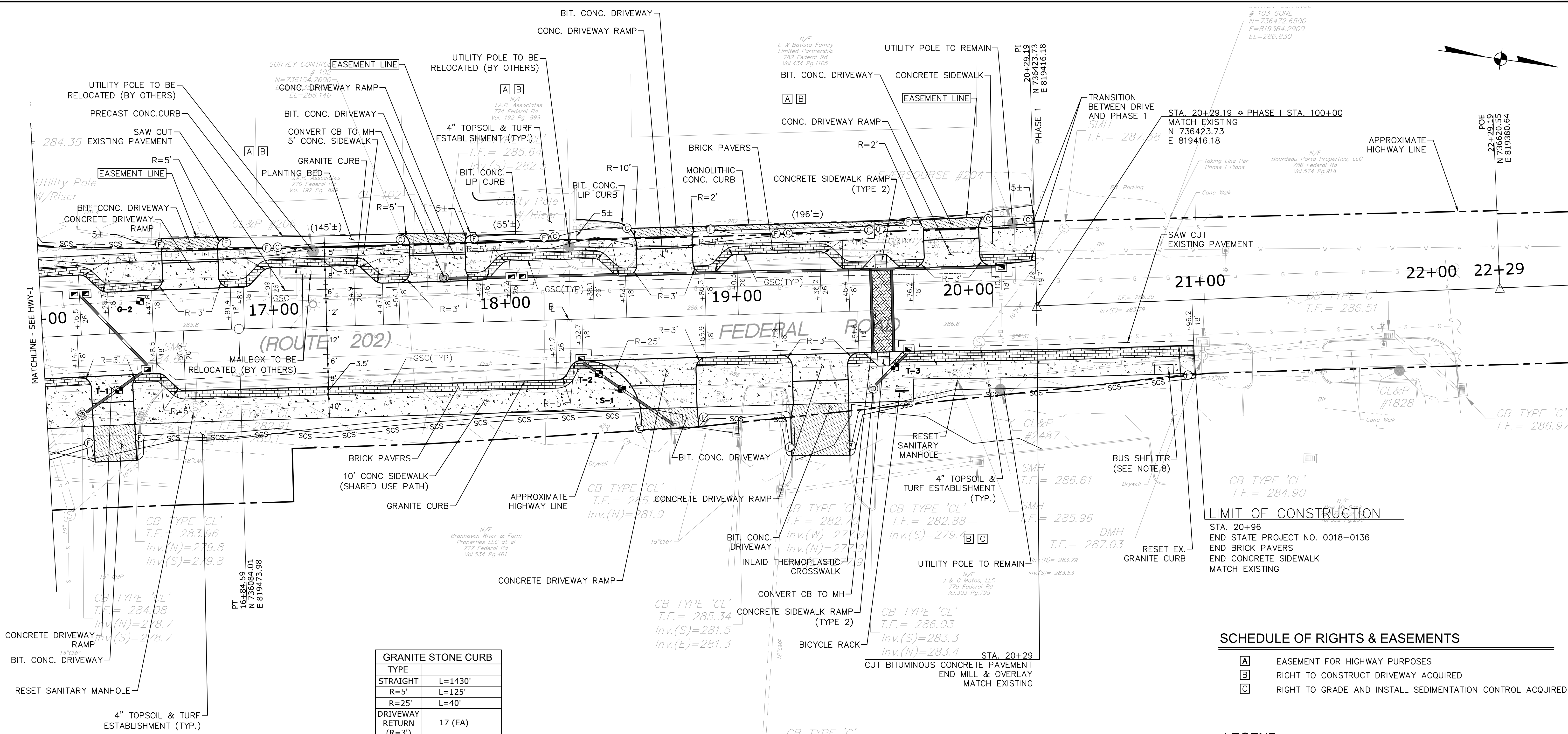
NO.	DATE	DESCRIPTION

DESIGNED:	YL
DRAFTED:	PT
CHECKED:	RG
APPROVED:	
SCALE:	AS NOTED
PROJECT NO.:	2017-0605
DATE:	10/30/2018
FILE:	HWY_MST_2017_0605_HWY

TITLE:	ROADWAY PLAN
SHEET NUMBER:	HWY-1

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- ### NOTES
- ALL SOIL DISTURBANCES SHALL BE TREATED WITH 4" TOPSOIL & TURF ESTABLISHMENT.
 - THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION.
 - CONTRACTOR SHALL COORDINATE WITH THE ENGINEER REGARDING THE LIMITS OF RESTORATION TO ENSURE A SMOOTH TRANSITION FROM NEW CONSTRUCTION TO EXISTING CONDITIONS.
 - CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" (CBYD) 1-800-922-4455 PRIOR TO COMMENCING CONSTRUCTION.
 - EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS OR AS DIRECTED BY THE ENGINEER.
 - CONTRACTOR SHALL COORDINATE WITH APPROPRIATE UTILITY FOR MANHOLES, GATES, BOXES AND FRAMES ETC., AFFECTED BY THE CONSTRUCTION ACTIVITIES WHICH ARE NOT IDENTIFIED AS BEING REMOVED SHALL BE RESET OR RECONSTRUCTED (AS REQUIRED) TO THE PROPER GRADE.
 - SEE LLP-1 & LLP-2 FOR ROOT BARRIER LOCATIONS
 - TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR. REFER TO SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
 - CLUSTER BOX UNITS TO BE FURNISHED BY THE TOWN AND INSTALL BY THE CONTRACTOR. LOCATION TO BE DETERMINED BY THE TOWN. REFER TO SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

GRANITE STONE CURB	
TYPE	
STRAIGHT	L=1430'
R=5'	L=125'
R=25'	L=40'
DRIVEWAY RETURN (R=3')	17 (EA)

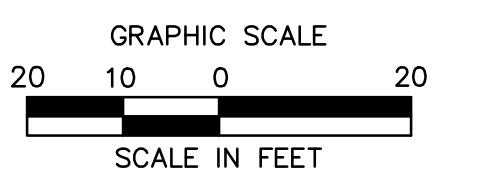
WATER (AQUARIUM)									
TEST PIT #	STATION	OFFSET	NORTHING	EASTING	GROUND ELEVATION (FT)	INV. ELEVATION OF PIPE (FT)	TOP OF UTILITY ELEVATION (FT)	DESCRIPTION	RELOCATION ANTICIPATED
G-2	16+17	17.00 LT	736040.085	819464.430	285.80±	282.20±	281.70±	12" PIPE	NO
TELEPHONE									
T-1	16+31	24.00 RT	736035.300	819507.076	285.80±	280.75±	281.80±	24" PIPE	NO
T-2	18+40	23.00 RT	736240.659	819470.655	286.40±	282.84±	282.40±	24" PIPE	NO
T-3	19+65	24.00 RT	736364.408	819450.618	286.60±	283.32±	282.60±	24" PIPE	NO
SANITARY SEWER									
S-1	18+50	30.00 RT	736251.168	819475.956	286.40±	282.60±	279.40±	8" PIPE	NO

SCHEDULE OF RIGHTS & EASEMENTS

- A** EASEMENT FOR HIGHWAY PURPOSES
- B** RIGHT TO CONSTRUCT DRIVEWAY ACQUIRED
- C** RIGHT TO GRADE AND INSTALL SEDIMENTATION CONTROL ACQUIRED

LEGEND

- BIT. CONCRETE
- CONCRETE SIDEWALK / CONCRETE DRIVEWAY APRON
- BRICK PAVERS
- TEST PIT
- FILL/CUT APPROXIMATE SLOPE LIMITS
- SEDIMENTATION CONTROL SYSTEM
- WETLANDS
- HIGHWAY LINE
- EASEMENT LINE



BROOKFIELD STREETSCAPE PHASE II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT

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 FREEMAN COMPANIES, LLC
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 BROOKFIELD, CONNECTICUT 06804

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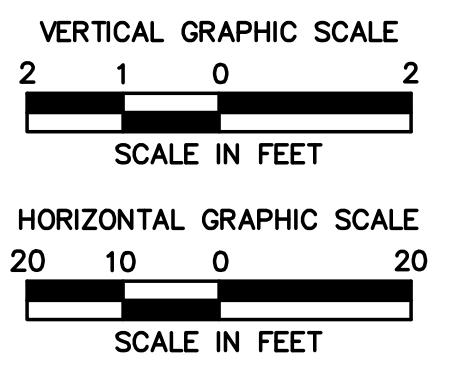
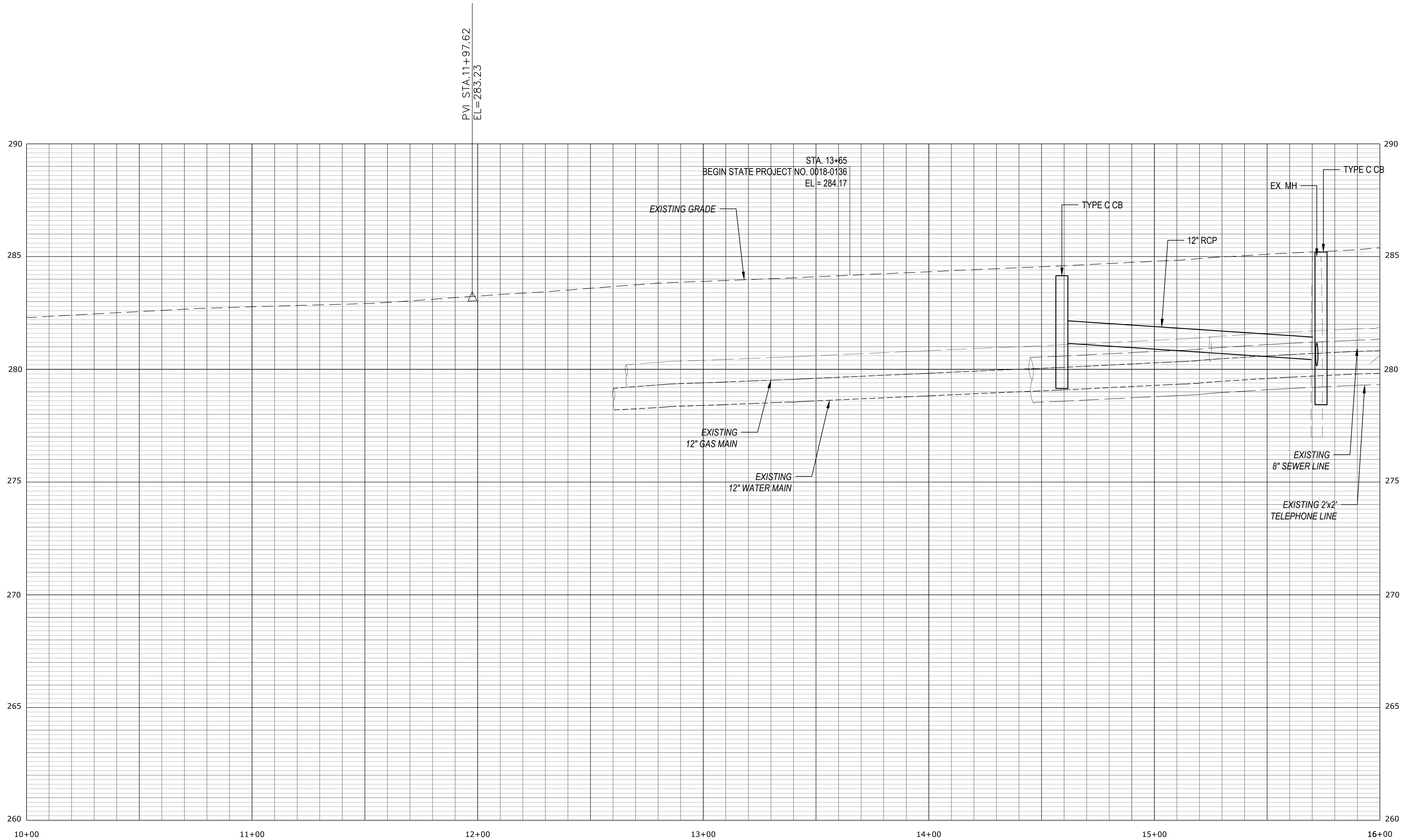
NO. 23422

NO.	DATE	DESCRIPTION

DESIGNED: YL	TITLE: ROADWAY PLAN
DRAFTED: PT	SHEET NUMBER: HWY-2
CHECKED: RG	
APPROVED:	
SCALE: AS NOTED	
PROJECT NO.: 2017-0605	
DATE: 10/30/2018	
FILE: HWY_MST_2017_0605_HWY	

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Freeman Companies, LLC - R:\2017\2017-0605 Brookfield Streetscape Phase 2\DWG\HW_MST_2017_0605_PRO.dwg, Jun 16, 2018 - 4:52pm Plotted By: plakur



BROOKFIELD STREETScape PHASE II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT

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 CIVIL | GEOTECHNICAL | SURVEY | ENVIRONMENTAL
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 BROOKFIELD,
 CONNECTICUT 06804

OWNER FOR
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 100 POCONO ROAD
 BROOKFIELD,
 CONNECTICUT 06804

YUYANG LIN, PE, P10X NO. 23422

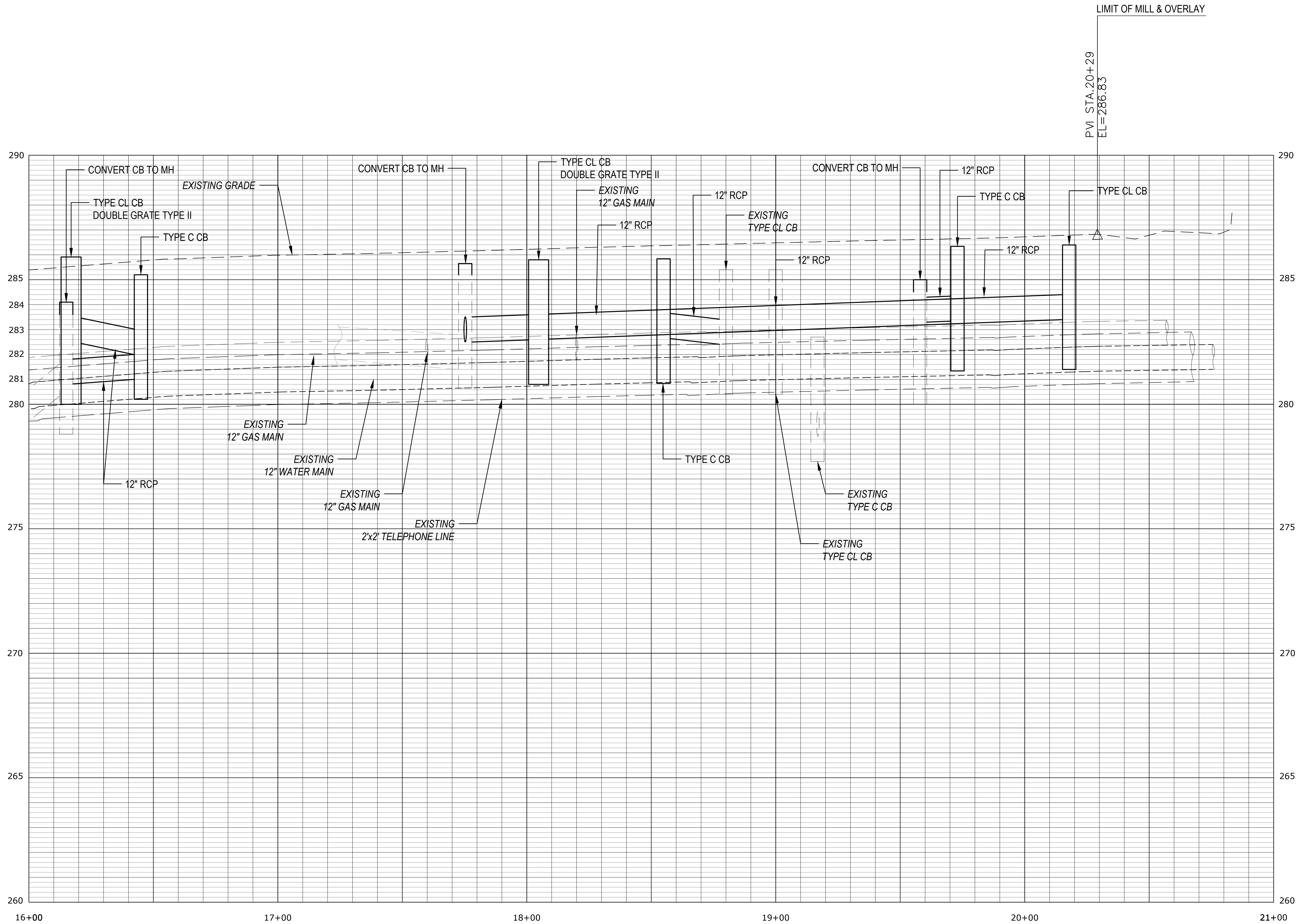
NO.	DATE	DESCRIPTION

DESIGNED: YL
 DRAFTED: MK
 CHECKED: RG
 APPROVED:
 SCALE: AS NOTED
 PROJECT NO.: 2017-0605
 DATE: 10/30/2018
 FILE: HW_MST_2017_0605_PRO

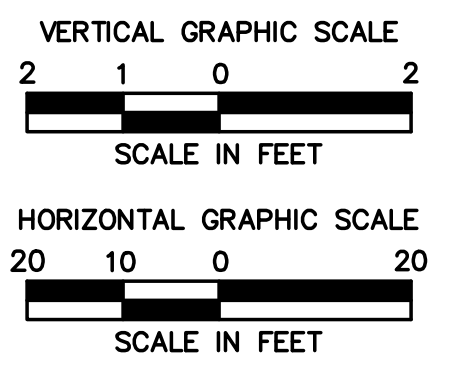
TITLE:
PROFILE PLAN

SHEET NUMBER:
PRO-1

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PVI STA. 20+29
EL=286.83
LIMIT OF MILL & OVERLAY



BROOKFIELD STREETScape PHASE II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT

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CONNECTICUT 06804

YUYANG LIN, PE, P102 NO. 23422

NO.	DATE	DESCRIPTION

DESIGNED: YL
DRAFTED: MK
CHECKED: RG
APPROVED: _____
SCALE: AS NOTED
PROJECT NO.: 2017-0605
DATE: 10/30/2018
FILE: HW_MST_2017_0605_PRO

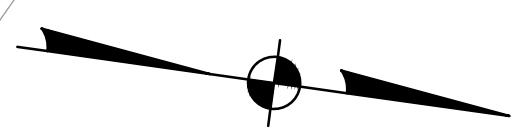
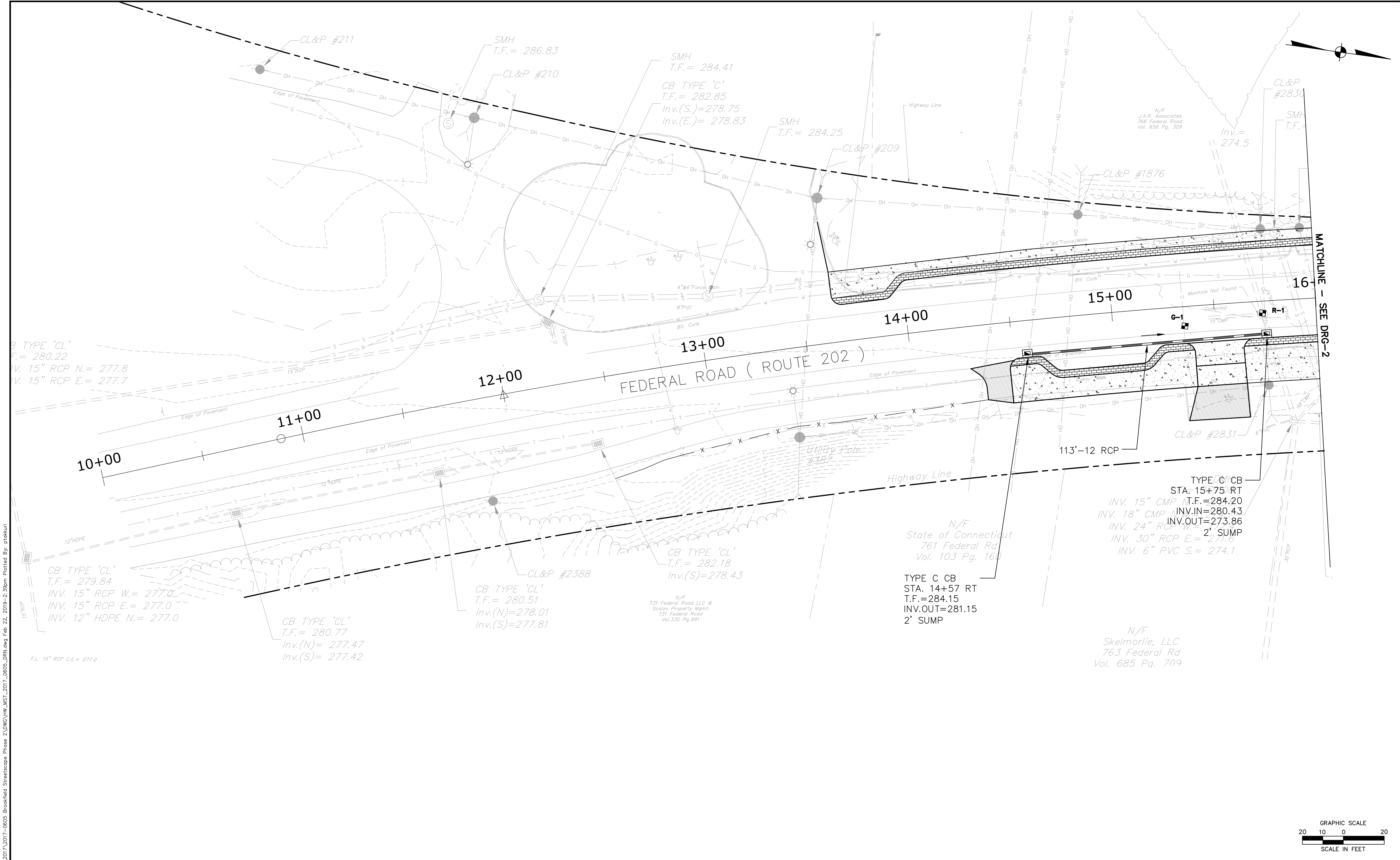
TITLE:
PROFILE PLAN

SHEET NUMBER:
PRO-2

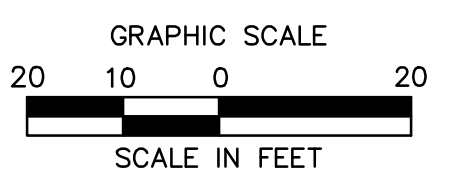
Freeman Companies, LLC - R:\2017\2017-0605 Brookfield Streetscape Phase 2\DWG\HW_MST_2017_0605_PRO.dwg, Jun 16, 2018 - 4:52pm Plotted By: plakur

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Freeman Companies, LLC - R:\2017\2017-0605 Brookfield Streetscape Phase 2\DWG\HW_MST_2017_0605_DRN.dwg Feb. 22, 2018 - 2:38pm Plotted By: ptkurki



MATCHLINE - SEE DRG-2



BROOKFIELD STREETScape PHASE II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT

FREEMAN COMPANIES
DBE | DAS | ABE | GNASDC CERTIFIED
CIVIL | GEOTECHNICAL | SURVEY | ENVIRONMENTAL
36 JOHN STREET
HARTFORD, CT 06106
WWW.FREEMANCO.COM
860.251.9500
TOLL FREE: (800)604-5141
FAC: (860)604-7151
ELEVATE YOUR EXPECTATIONS

PREPARED FOR
TOWN OF BROOKFIELD
100 POCOMO ROAD
BROOKFIELD,
CONNECTICUT 06804

OWNER FOR
TOWN OF BROOKFIELD
100 POCOMO ROAD
BROOKFIELD,
CONNECTICUT 06804

YUYANG LIN, PE, P102 NO. 23422

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF FREEMAN COMPANIES, LLC.

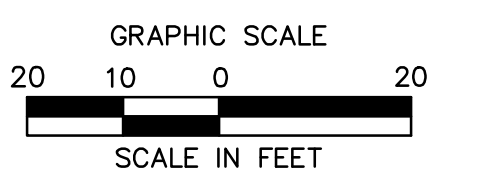
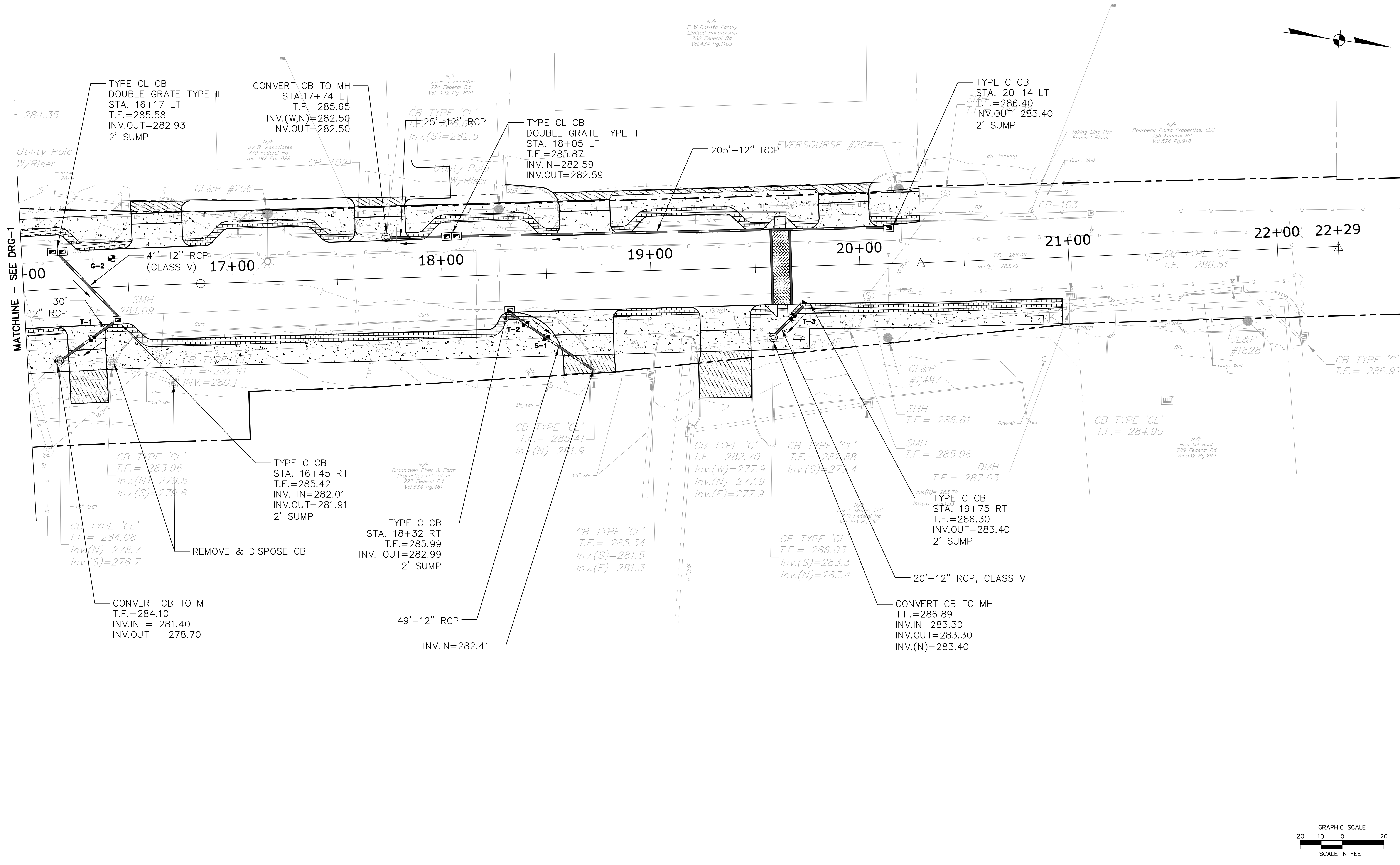
NO.	DATE	DESCRIPTION

DESIGNED: YL
DRAFTED: PT
CHECKED: RG
APPROVED: RG
SCALE: 1" = 20'
PROJECT NO.: 2017-0605
DATE: 10/30/2018
FILE: HW_MST_2017_0605_DRN

TITLE:
DRAINAGE PLAN

SHEET NUMBER:
DRG-1

Freeman Companies, LLC - R:\2017\2017-0605 Brookfield Streetscape Phase 2\DWG\HW_MST_2017-0605_DRN.dwg, Jan 31, 2019-10:34am, Plotted By: atakur



BROOKFIELD STREETScape PHASE II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT

FREEMAN COMPANIES
DBE | DAS | MBE | GNASDC CERTIFIED
 CIVIL | GEOTECHNICAL | SURVEY | ENVIRONMENTAL
 30 JOHN STREET
 HARTFORD, CT 06106
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 BROOKFIELD,
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OWNER FOR
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 100 POCONO ROAD
 BROOKFIELD,
 CONNECTICUT 06804

TUYANG LIN, PE, P102 NO. 23422

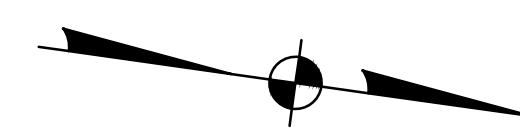
REVISIONS	
NO.	DATE DESCRIPTION

DESIGNED: YL
DRAFTED: PT
CHECKED: RG
APPROVED: _____
SCALE: 1" = 20'
PROJECT NO.: 2017-0605
DATE: 10/30/2018
FILE: HW_MST_2017_0605_DRN

TITLE:
DRAINAGE PLAN

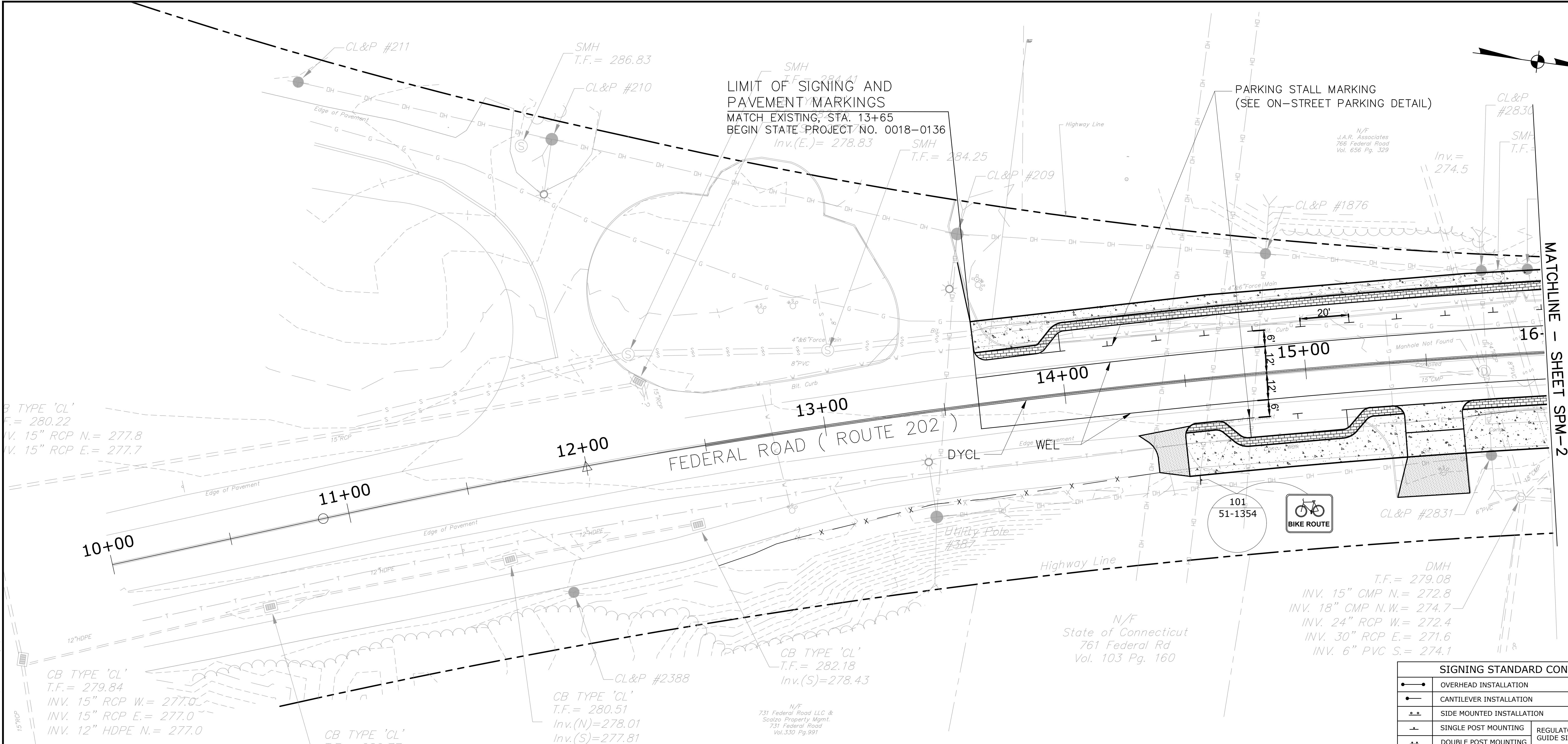
SHEET NUMBER:
DRG-2

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LIMIT OF SIGNING AND PAVEMENT MARKINGS
 MATCH EXISTING STA. 13+65
 BEGIN STATE PROJECT NO. 0018-0136
 Inv.(E.)= 278.83

PARKING STALL MARKING
 (SEE ON-STREET PARKING DETAIL)



MATCHLINE - SHEET SPM-2

CB TYPE 'CL'
 T.F.= 280.22
 INV. 15" RCP N.= 277.8
 INV. 15" RCP E.= 277.7

CB TYPE 'CL'
 T.F.= 279.84
 INV. 15" RCP W.= 277.0
 INV. 15" RCP E.= 277.0
 INV. 12" HDPE N.= 277.0

CB TYPE 'CL'
 T.F.= 280.77
 Inv.(N)= 277.47
 Inv.(S)= 277.42

CB TYPE 'CL'
 T.F.= 280.51
 Inv.(N)=278.01
 Inv.(S)=277.41

CB TYPE 'CL'
 T.F.= 282.18
 Inv.(S)=278.43

DMH
 T.F.= 279.08
 INV. 15" CMP N.= 272.8
 INV. 18" CMP N.W.= 274.7
 INV. 24" RCP W.= 272.4
 INV. 30" RCP E.= 271.6
 INV. 6" PVC S.= 274.1

N/F
 State of Connecticut
 761 Federal Rd
 Vol. 103 Pg. 160

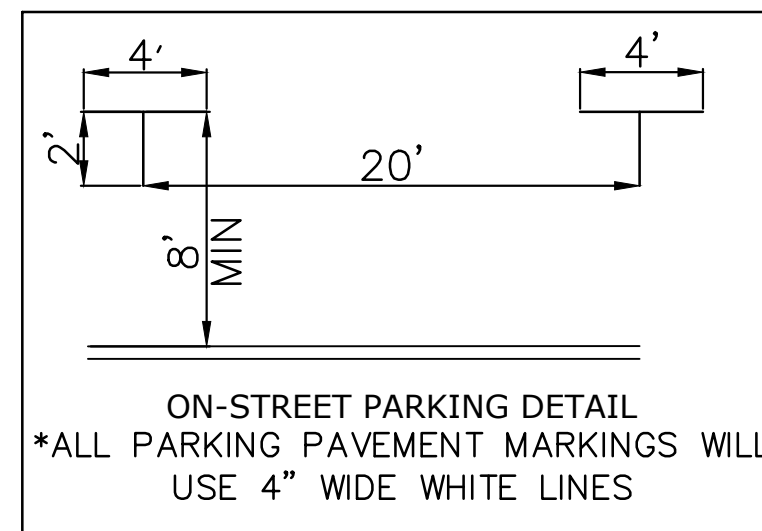
N/F
 731 Federal Road LLC &
 Scobio Property Mgmt.
 731 Federal Road
 Vol. 330 Pg. 991

SIGNING NOTES:

- INSTALL ALL SIGNS AS INDICATED.
- ALL EXISTING SIGNS WITHIN LIMIT OF CONSTRUCTION TO BE REMOVED UNLESS OTHERWISE NOTED ON PLANS OR DIRECTED BY THE ENGINEER.
- ALL EXISTING SIGNS OUTSIDE THE LIMIT OF CONSTRUCTION TO REMAIN UNLESS OTHERWISE NOTED ON PLANS OR DIRECTED BY THE ENGINEER.
- EXACT SIGN LOCATIONS TO BE DETERMINED IN THE FIELD.
- WHEN A SIGN IS TO BE REPLACED, THE EXISTING SIGN SHOULD NOT BE REMOVED UNTIL THE NEW REPLACEMENT SIGN IS INSTALLED.
- SIGNS SHALL NOT BE PLACED LESS THAN 10 FEET FROM UTILITY POLES.
- INSTALL SIGNS IN ACCORDANCE WITH CTDOT STANDARD SHEETS "SIGN PLACEMENT AND RETROREFLECTIVE STRIP DETAILS" AND "METAL SIGN POSTS AND SIGN MOUNTING DETAILS".

PAVEMENT MARKING LEGEND

- WEL 4" WHITE EDGE LINE
- DYCL 4" DOUBLE YELLOW CENTERLINE

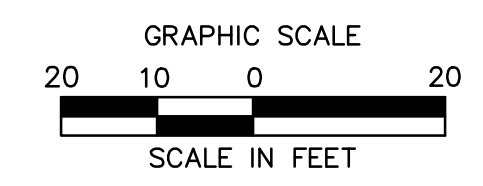


PAVEMENT MARKING NOTES:

- ALL FINAL PAVEMENT MARKINGS TO BE EPOXY UNLESS OTHERWISE NOTED ON THE PLANS .
- INSTALL ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF CONSTRUCTION UNLESS OTHERWISE SHOWN OR AS DIRECTED BY THE ENGINEER. MATCH TO EXISTING PAVEMENT MARKINGS AT THE LIMIT OF CONSTRUCTION.
- PAVEMENT MARKINGS TO BE INSTALLED IN ACCORDANCE WITH TRAFFIC STANDARD SHEETS TR-1210_04, TR-1210_08 AND TR-1210_09 EXCEPT AS OTHERWISE DIMENSIONED OR SHOWN ON PLANS.
- EXISTING PAVEMENT MARKINGS SHALL BE REMOVED BY CONTRACTOR WHERE IN CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS BY A METHOD WHICH IS ACCEPTABLE BY CTDOT DISTRICT OFFICE AND THE TOWN. GRINDING IS NOT ALLOWED.

SIGNING STANDARD CONVENTIONS

	OVERHEAD INSTALLATION
	CANTILEVER INSTALLATION
	SIDE MOUNTED INSTALLATION
	SINGLE POST MOUNTING
	DOUBLE POST MOUNTING
	REGULATORY, WARNING OR GUIDE SIGN INSTALLATION
	LOCATION NO. SIGN NO.



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 100 POCONO ROAD
 BROOKFIELD,
 CONNECTICUT 06804

OWNER FOR
 TOWN OF BROOKFIELD
 100 POCONO ROAD
 BROOKFIELD,
 CONNECTICUT 06804

YUYANG LIN, PE, P102 NO. 23422

**BROOKFIELD STREETScape PHASE II
 ROUTE 202 (FEDERAL ROAD)
 BROOKFIELD, CONNECTICUT**

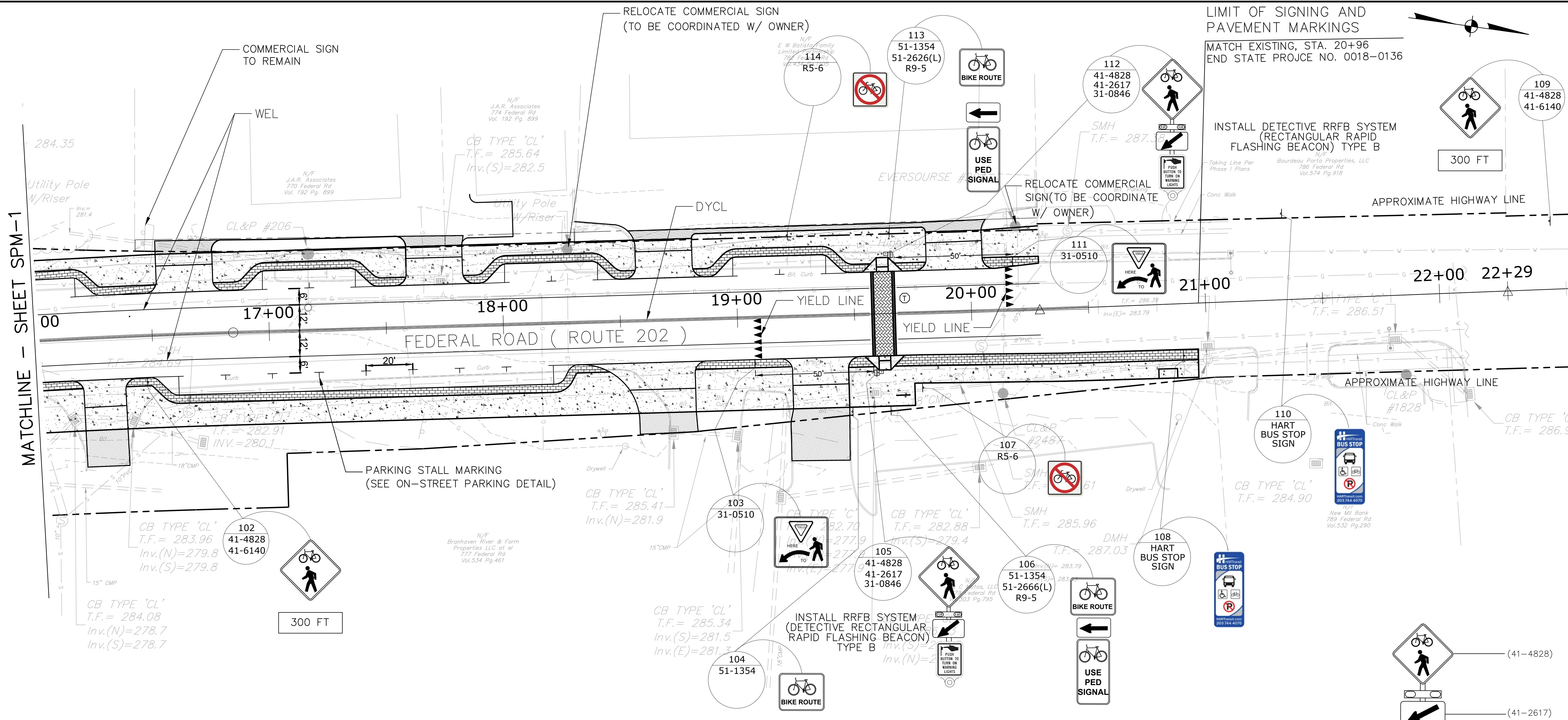
NO.	DATE	DESCRIPTION

DESIGNED:	YL
DRAFTED:	PT
CHECKED:	RG
APPROVED:	
SCALE:	1" = 20'
PROJECT NO.:	2017-0605
DATE:	10/30/2018
FILE:	HW_MST_2017_0605_SPM

TITLE: SIGNAGE & PAVEMENT MARKING PLAN
 SHEET NUMBER: SPM-1

Freeman Companies, LLC - R:\2017\2017-0605 Brookfield Streetscape Phase 2\DWG\HW_MST_2017_0605_SPM.dwg Feb. 22, 2018 - 2:37pm Plotted By: ptkurki

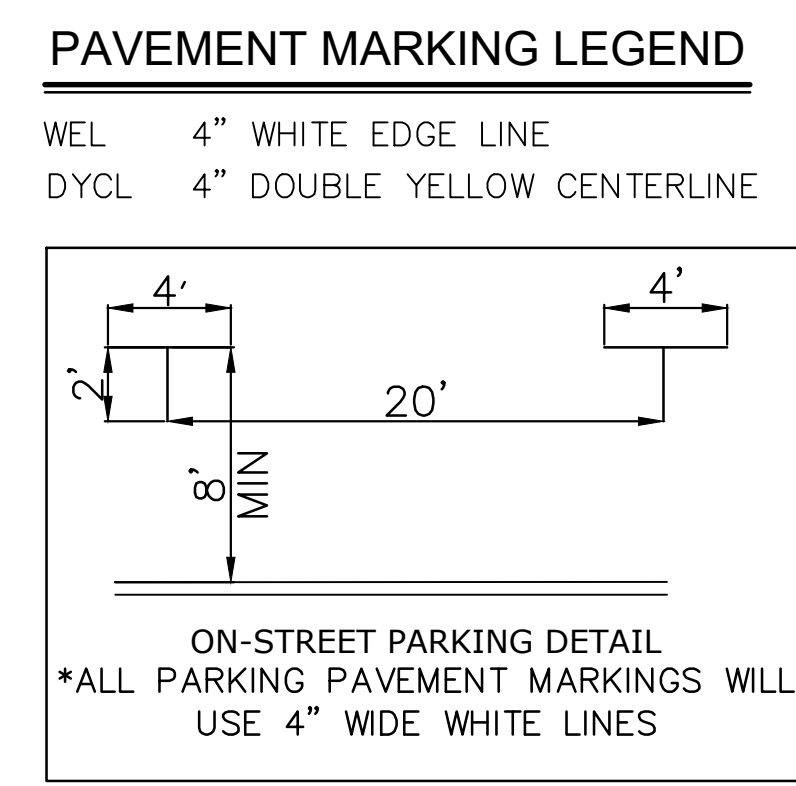
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MATCHLINE - SHEET SPM-1

LIMIT OF SIGNING AND PAVEMENT MARKINGS
 MATCH EXISTING, STA. 20+96
 END STATE PROJCE NO. 0018-0136

- SIGNING NOTES:**
- INSTALL ALL SIGNS AS INDICATED.
 - ALL EXISTING SIGNS WITHIN LIMIT OF CONSTRUCTION TO BE REMOVED UNLESS OTHERWISE NOTED ON PLANS OR DIRECTED BY THE ENGINEER.
 - ALL EXISTING SIGNS OUTSIDE THE LIMIT OF CONSTRUCTION TO REMAIN UNLESS OTHERWISE NOTED ON PLANS OR DIRECTED BY THE ENGINEER.
 - EXACT SIGN LOCATIONS TO BE DETERMINED IN THE FIELD.
 - WHEN A SIGN IS TO BE REPLACED, THE EXISTING SIGN SHOULD NOT BE REMOVED UNTIL THE NEW REPLACEMENT SIGN IS INSTALLED.
 - SIGNS SHALL NOT BE PLACED LESS THAN 10 FEET FROM UTILITY POLES.
 - INSTALL SIGNS IN ACCORDANCE WITH CTDOT STANDARD SHEETS "SIGN PLACEMENT AND RETROREFLECTIVE STRIP DETAILS" AND "METAL SIGN POSTS AND SIGN MOUNTING DETAILS".

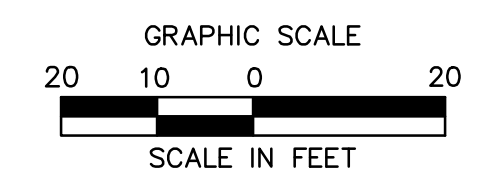
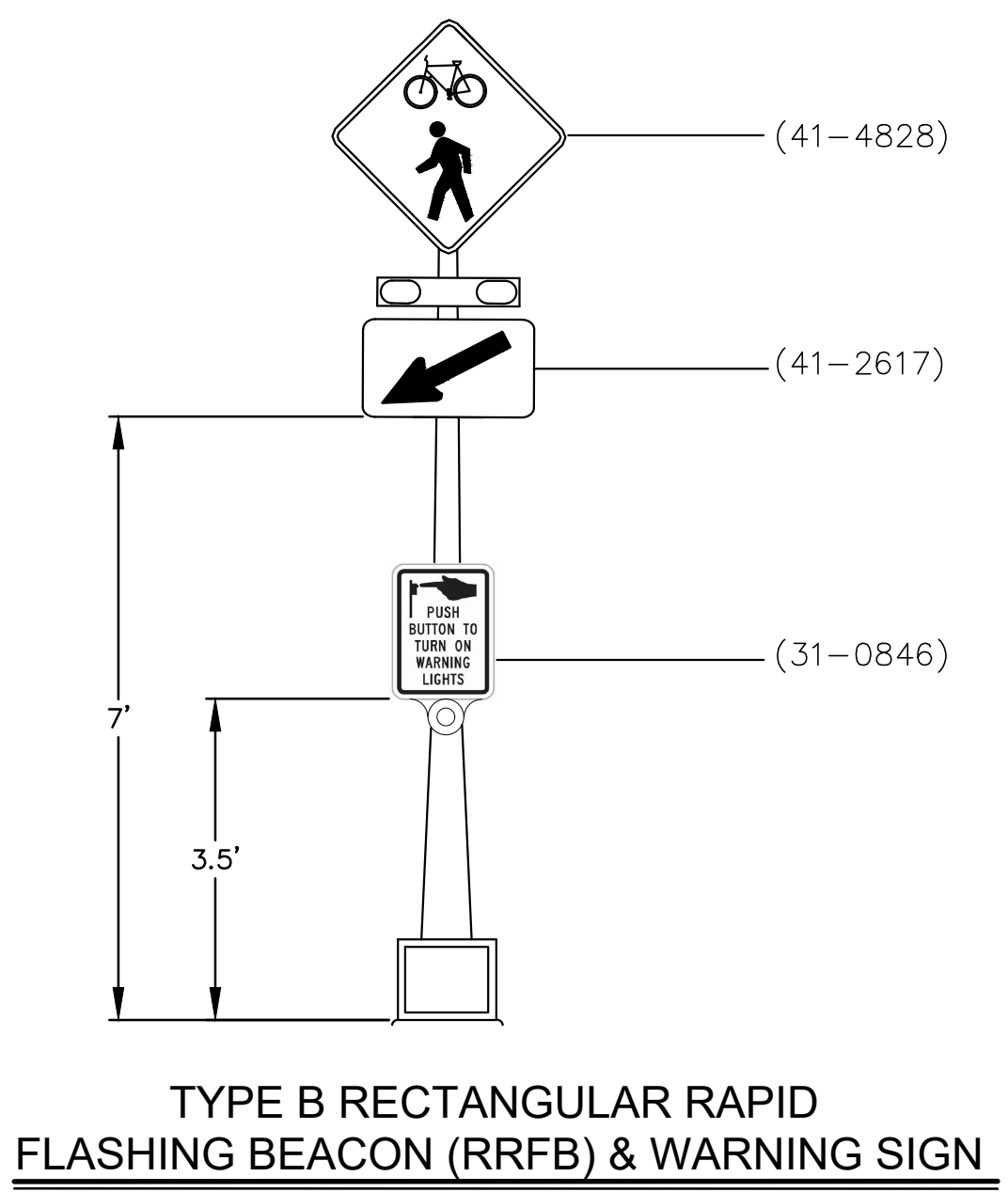


- PAVEMENT MARKING NOTES:**
- ALL FINAL PAVEMENT MARKINGS TO BE EPOXY UNLESS OTHERWISE NOTED ON THE PLANS.
 - INSTALL ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF CONSTRUCTION UNLESS OTHERWISE SHOWN OR AS DIRECTED BY THE ENGINEER. MATCH TO EXISTING PAVEMENT MARKINGS AT THE LIMIT OF CONSTRUCTION.
 - PAVEMENT MARKINGS TO BE INSTALLED IN ACCORDANCE WITH TRAFFIC STANDARD SHEETS TR-1210_04, TR-1210_08 AND TR-1210_09 EXCEPT AS OTHERWISE DIMENSIONED OR SHOWN ON PLANS.
 - EXISTING PAVEMENT MARKINGS SHALL BE REMOVED BY CONTRACTOR WHERE IN CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS BY A METHOD WHICH IS ACCEPTABLE BY CTDOT DISTRICT OFFICE AND THE CITY. GRINDING IS NOT ALLOWED.
 - TOWN OF BROOKFIELD TO MAINTAIN PARKING STALL PAVEMENT MARKINGS.
- Ⓢ STAMPED THERMOPLASTIC CROSSWALK, 8' WIDTH WITH 12" WIDE WHITE EPOXY RESIN TRANSVERSE LINE ON BOTH SIDES (TOWN MAINTAINED). SEE SHEET NO. MDS-2 FOR ADDITIONAL INFORMATION.

SIGNING STANDARD CONVENTIONS

—●—	OVERHEAD INSTALLATION	
—■—	CANTILEVER INSTALLATION	
—○—	SIDE MOUNTED INSTALLATION	
—+—	SINGLE POST MOUNTING	REGULATORY, WARNING OR GUIDE SIGN INSTALLATION
—+—	DOUBLE POST MOUNTING	

00	LOCATION NO.
00-0	SIGN NO.



Freeman Companies, LLC - R:\2017\2017-0605_Brookfield Streetscape Phase 2\DWG\HW_MST_2017_0605_SPM.dwg Feb. 25, 2018 - 3:35pm Plotted By: ptkurki

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 FREEMAN COMPANIES, LLC
 34 JOHN STREET
 HARTFORD, CT 06106
 WWW.FREEMANCO.COM
 (860) 51-9500
 TOLL FREE: (800) 604-5141
 FAX: (860) 605-7151
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PREPARED FOR
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 100 POCOMO ROAD
 BROOKFIELD, CONNECTICUT 06804

OWNER FOR
 TOWN OF BROOKFIELD
 100 POCOMO ROAD
 BROOKFIELD, CONNECTICUT 06804

YUYANG LIN, PE, P102 NO. 23422

BROOKFIELD STREETScape PHASE II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT

DESIGNED: YL
 DRAFTED: PT
 CHECKED: RG
 APPROVED: _____
 SCALE: 1" = 20'
 PROJECT NO.: 2017-0605
 DATE: 10/30/2018
 FILE: HW_MST_2017_0605_SPM

TITLE: SIGNAGE & PAVEMENT MARKING PLAN
 SHEET NUMBER: SPM-2

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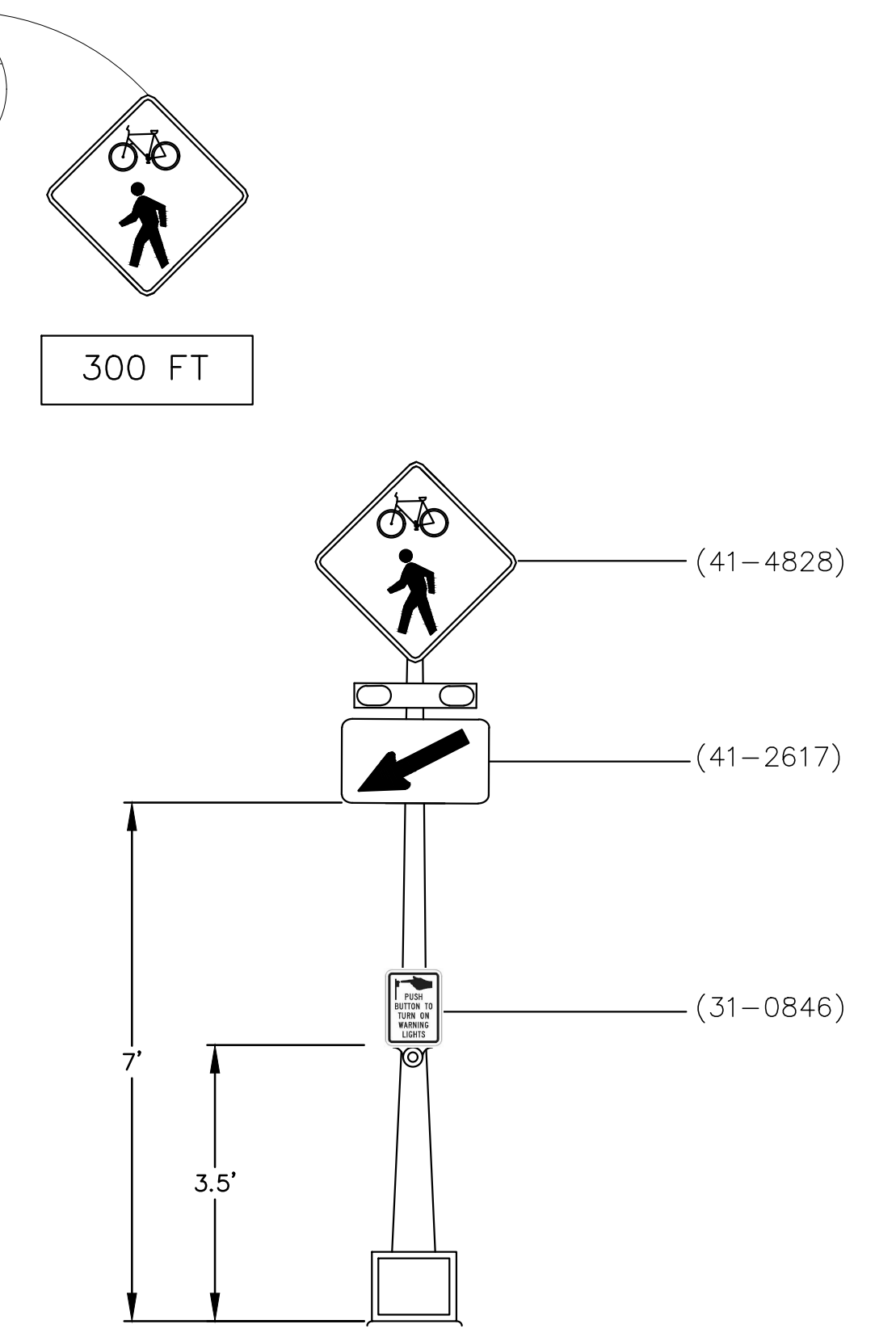
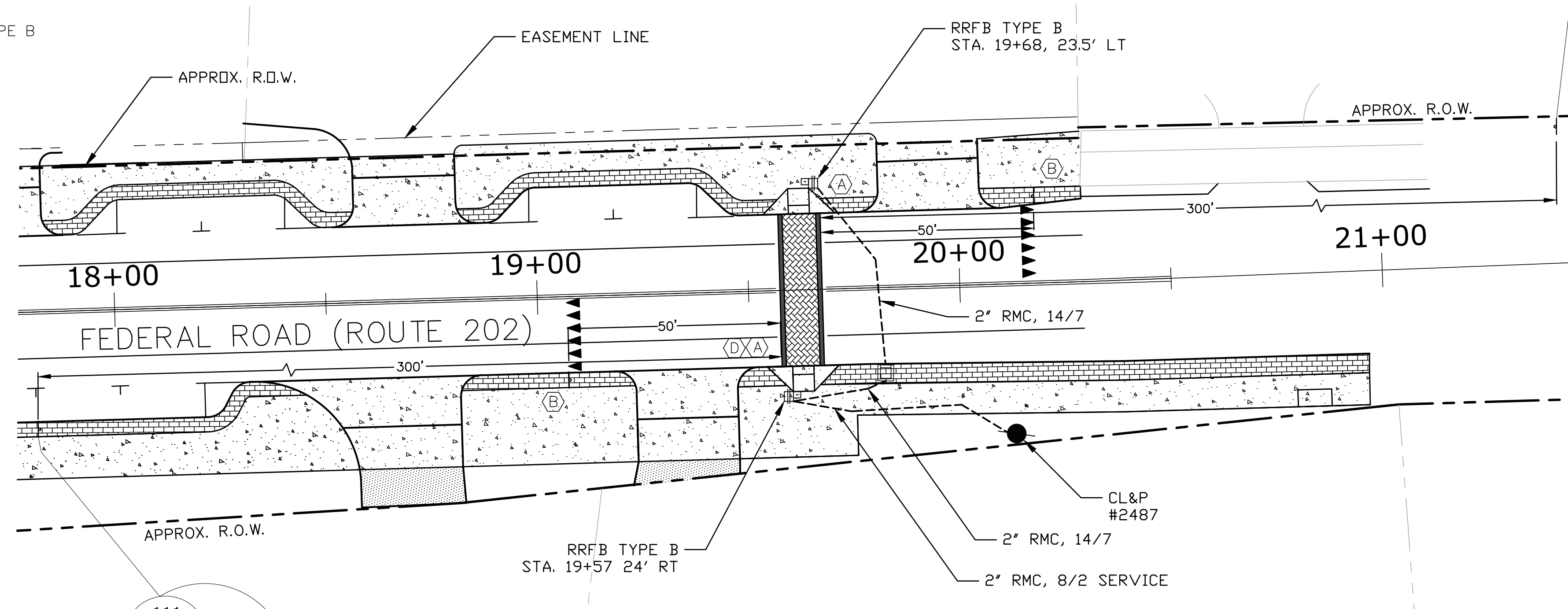
		MOVEMENT DIAGRAM																							
		PHASE 1			PHASE 2			PHASE 3			PHASE 4			PHASE 5			PHASE 6			PHASE 7			PHASE 8		
		FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL		
F A C E #																									

TECHNICAL NOTES		OFFICE RECORD	
RECTANGULAR RAPID FLASHERS TO FLASH FOR 18 SECONDS UPON ACTUATION. (11-19 SECONDS ADJUSTABLE) 18 SECONDS TIMER SHOULD RESET UPON EACH ACTUATION.		REV #	TIR #
			SM # N/A
			INSTALLED RAPID RECTANGULAR FLASHING BEACON (RRFB) UNDER PROJECT 0018 - 0136

- CONSTRUCTION NOTES :**
- ALL TRAFFIC EQUIPMENT IS NEW.
 - STAKE ALL R.O.W. PRIOR TO EXCAVATION.
 - ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.
 - THE LOCATION OF TRAFFIC SIGNAL FOUNDATIONS WHEN IN OR ADJACENT TO SIDEWALKS SHALL BE VERIFIED PRIOR TO INSTALLATION TO PROVIDE A FREE PATH OF NOT LESS THAN 4 FEET. IF A MINIMUM 4 FEET FREE PATH IS UNAVAILABLE NOTIFY THE ENGINEER AND CONTACT THE DIVISION OF TRAFFIC ENGINEERING .
 - INSTALL RISER ON CL&P # 2487 UTILITY POLE.
 - COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.
 - INSTALL RRFB ON 14' PEDESTAL.
- (D) INSTALL FLASHER CABINET ON PEDESTAL AS SHOWN.
FLASHER CABINET TO CONTROL RECTANGULAR RAPID FLASHING BEACONS.

SIGN LEGEND

- (A) INSTALL RECTANGULAR RAPID FLASHING BEACON ASSEMBLY TYPE B TOWN OWNED AND MAINTAINED
 - (B) INSTALL
 - (C) INSTALL
-



- NOTE:**
- TOWN OF BROOKFIELD TO OWN AND MAINTAIN RAPID RECTANGULAR FLASHING BEACON ASSEMBLY.
 - SEE SEPARATE SIGNING AND PAVEMENT MARKING PLAN.
 - CROSSWALK TO BE TOWN MAINTAINED.

TOWN RRFB ASSEMBLY

ENGINEER	TRAFFIC	DATE	ELECTRICAL	DATE	INTERSECTION NO. 0018 - 901P	
DRAWN BY	FREEMAN COMPANIES				ENERGY BY TOWN	
CHECKED BY	36 JOHN STREET HARTFORD, CONNECTICUT 06106 TEL: 860-251-9500 FAX: 860-980-7151				ADDRESS N/A	
SUBMITTED BY					MAINT LEVEL 5	
APPROVED BY					SERVICE POLE CL&P # 2487	
APPROVED DATE					UNMETERED SERVICE	
TOWN OF BROOKFIELD DEPARTMENT OF TRANSPORTATION					TOWN: BROOKFIELD	
					PROJECT NO. 0018-0136	
					DRAWING NO.	
					DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN	
					SHEET NO. TCS-1	

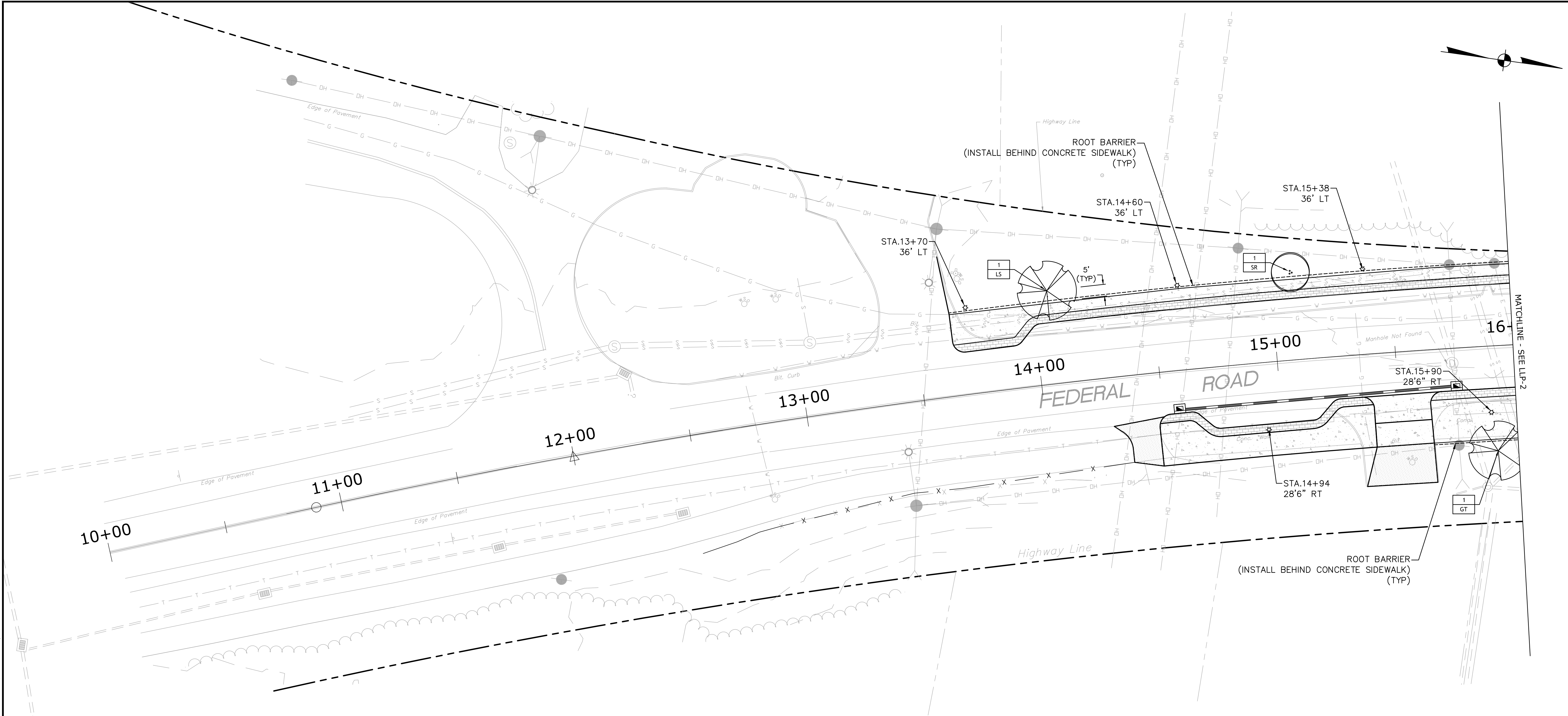
NO.	DATE	REVISION DESCRIPTION

LEGEND:	<ul style="list-style-type: none"> R RED Y YELLOW G GREEN ←- RED ARROW ←- YELLOW ARROW ←- GREEN ARROW W/P WALK/ PED. CLR D.W. DON'T WALK FL. FLASHING 	<ul style="list-style-type: none"> ○ PROPOSED WOOD SPAN POLE ● EXISTING WOOD SPAN POLE □ PROPOSED STEEL SPAN POLE ■ EXISTING STEEL SPAN POLE ○ PROPOSED UTILITY POLE ● EXISTING UTILITY POLE □ PEDESTAL MOUNTING ■ PEDESTAL PUSH BUTTON & SIGN ➔ DIRECTIONAL ARW. FOR PUSH BUTTON 	<ul style="list-style-type: none"> □ TRAFFIC SIGNAL FACE □ PEDESTRIAN SIGNAL FACE DET. LEADS IN SAW CUT — EXISTING RMC (RIGID METAL CONDUIT) — PROPOSED RMC (RIGID METAL CONDUIT) — EXISTING UTILITY POLE □ AUXILIARY EQUIPMENT CABINET □ VIDEO DETECTION ZONE 	<ul style="list-style-type: none"> □ PROPOSED LIGHT POLE □ PROPOSED CONTROLLER □ EXISTING CONTROLLER □ LOOP DETECTOR □ SD SYSTEM DETECTOR □ MAGNETIC DETECTOR □ OPTICAL DETECTOR □ VIDEO DETECTOR □ VIDEO CAMERA CABLE 	<ul style="list-style-type: none"> □ EXISTING LIGHT POLE □ SIDEWALK RAMP □ CABLE CLOSURE □ WIRELESS SENSOR □ WIRELESS RECEIVER □ WIRELESS TRANSMITTER □ GUY WIRE □ PROPOSED HANDHOLE □ EXISTING HANDHOLE
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DATE PLOTTED : Feb 25, 2019 Traffic Signal Plan.dwg

SCALE 1" = 20'

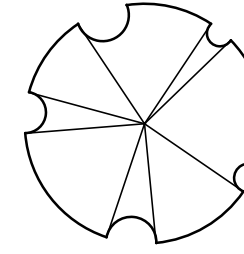
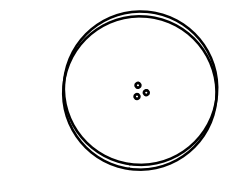

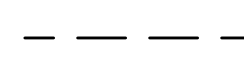

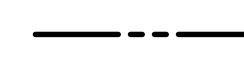
Freeman Companies, LLC - R:\2017\2017-0605 Brookfield Streetscape Phase 2\DWG\HW_MST_2017_0605_LDS.dwg Feb 22, 2019-3:41pm Plotted By: plakaur

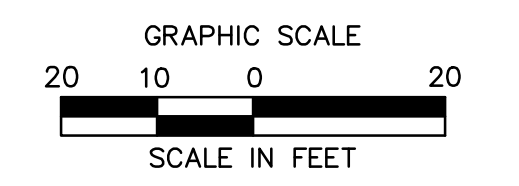


F.L. 15" RCP C.E. = 277.0

NOTE: SEE COMPLETE PLANT LIST ON SHEET LLP-2
 CONTRACTOR SHALL SUBMIT TREE STAKING SYSTEM FOR APPROVAL BY THE ENGINEER.
 REFER TO SECTION 9.49 OF THE STANDARD SPECIFICATION.

LEGEND

-  SHADE TREES
-  ORNAMENTAL TREES
-  PERENNIAL PLANTS
-  ROOT BARRIER
-  ORNAMENTAL LIGHTS
-  HIGHWAY LINE



BROOKFIELD STREETScape PHASE II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT

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 LAND DEVELOPMENT | ENGINEERING | DESIGN | CONSTRUCTION SERVICES
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YUYANG LIN, PE, P102 NO. 23422

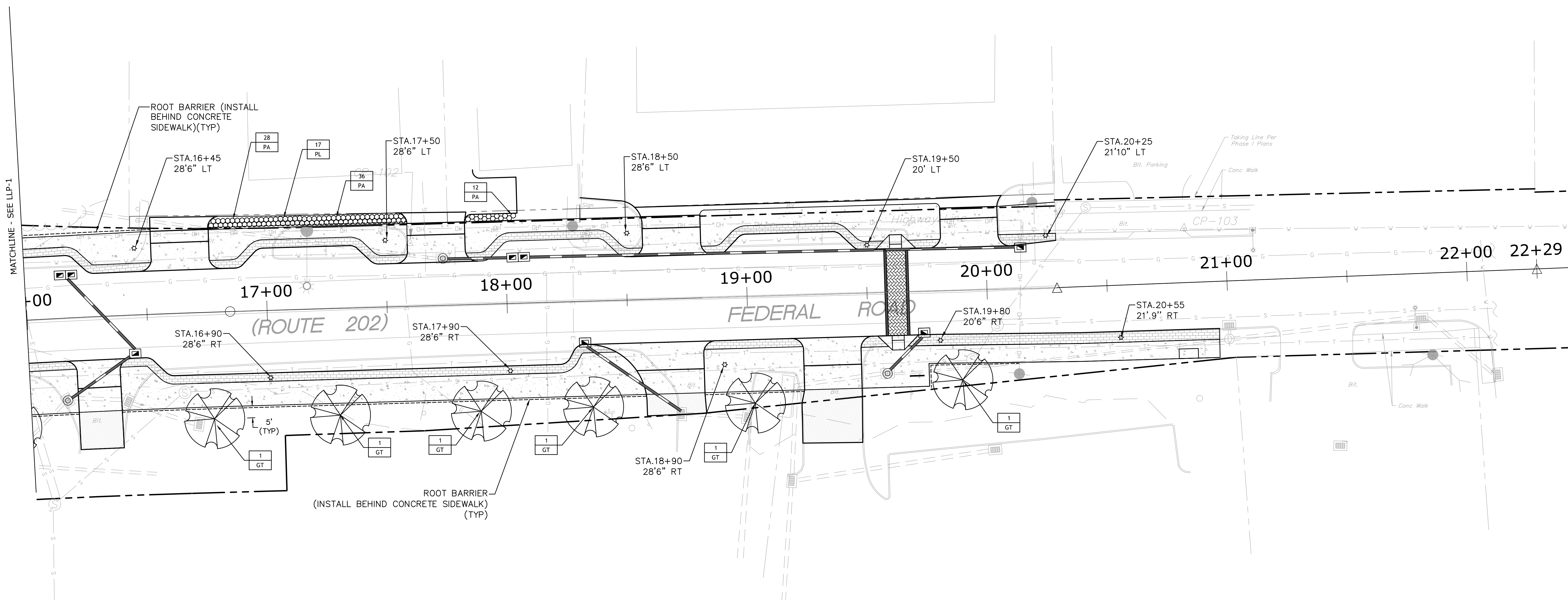
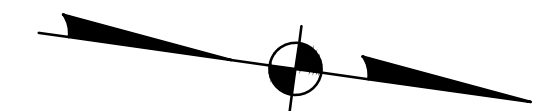
NO.	DATE	DESCRIPTION

DESIGNED: YL
 DRAFTED: KM
 CHECKED: RG
 APPROVED:
 SCALE: 1" = 20'
 PROJECT NO.: 2017-0605
 DATE: 10/30/2018
 FILE: HW_MST_2017_0605_LDS

TITLE:
**LANDSCAPE AND
 LIGHTING PLAN**

SHEET NUMBER:
LLP-1

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF FREEMAN COMPANIES, LLC.

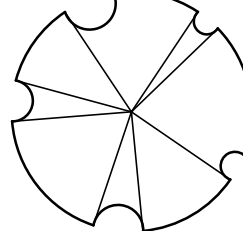
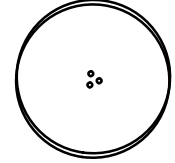
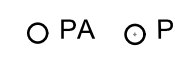
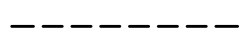

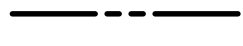
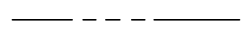


MATCHLINE - SEE LLP-1

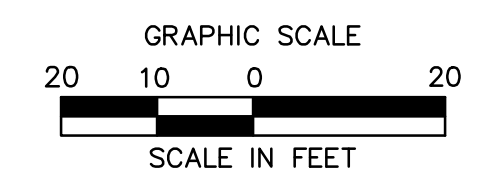
NOTE: THE TOWN WILL OWN, MAINTAIN AND PAY THE ENERGY COSTS FOR THE PROPOSED DECORATIVE LIGHTING SYSTEM.

EVERSOURCE
 MR. WAYNE D. GAGNON
 ENGINEERING - SYSTEM OPERATIONS MANAGER
 107 SELDEN STREET
 BERLIN, CT 06037
 TEL. (860) 665-3515
 E-MAIL: gagnow@eversource.com

LEGEND

-  SHADE TREES
-  ORNAMENTAL TREES
-  PERENNIAL PLANTS
-  ROOT BARRIER
-  ORNAMENTAL LIGHTS
-  HIGHWAY LINE
-  EASEMENT LINE

Qty.	Key	Name-Botanical/Common	Size at Maturity	Planted Size	Light Preference	Comments	Landscape Characteristics
DECIDUOUS TREES							
7	GT	Gleditsia triacanthos 'Shademaster'	40' ht./spd.	2 1/2 - 3"	Full Sun	B&B	Native, strong central leader, upright branching forming a pyramidal habit. Urban tolerant, ideal street tree.
1	LS	Liquidambar styraciflua 'Moriane'	60' ht. 40' spd.	2 1/2 - 3"	Full Sun	B&B	Native, pyramidal to rounded neat outline, deep glossy green star shaped leaves, rich yellow-purple-red tones in fall, 1" brown winged distinctive fruit, excellent park and street tree.
ORNAMENTAL TREES							
1	SR	Syringa reticulata 'Ivory Silk'	10-30' ht.	2 - 2 1/2" cal.	Full Sun	B&B	Specimen tree, street tree, large clusters of creamy white flowers in June. Graceful with maturity. Reddish brown bark.
PERENNIALS							
76	PA	Pennisetum alopecuroides 'Hamein'	2' ht./spd.	2 gal.	Full Sun	cont.	A slender, arching compact grass with graceful plumes August to October.
17	PL	Perovskia atriplicifolia 'Little Spires'	24" ht./spd	2 gal.	Full Sun	cont.	Stays upright, deep violet flowers on deeply cut gray foliage July to September.



BROOKFIELD STREETScape PHASE II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT

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 BROOKFIELD,
 CONNECTICUT 06804

OWNER FOR
 TOWN OF BROOKFIELD
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 BROOKFIELD,
 CONNECTICUT 06804

YUYANG LIN, PE, P102 NO. 23422

NO.	DATE	DESCRIPTION

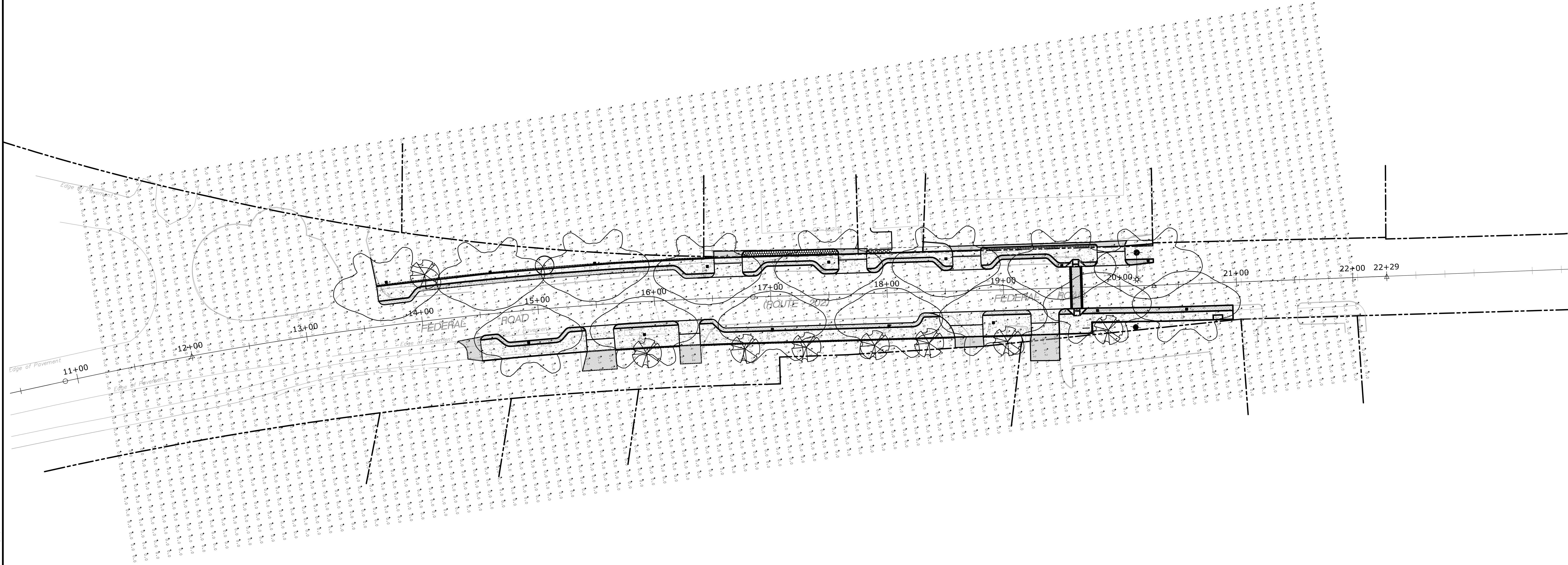
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 CHECKED: RG
 APPROVED: _____
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 PROJECT NO.: 2017-0605
 DATE: 10/30/2018
 FILE: HW_MST_2017_0605_LDS

TITLE:
LANDSCAPE AND LIGHTING PLAN

SHEET NUMBER:
LLP-2

Freeman Companies, LLC - R:\2017\2017-0605_Brookfield Streetscape Phase 2\DWG\HW_MST_2017_0605_LDS.dwg Feb 22, 2019 - 3:42pm Plotted By: plakuri

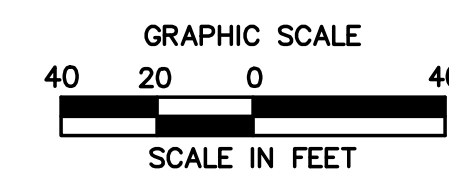
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JOB NAME: TOWN OF BROOKFIELD STREETScape Phase II
 APEX LIGHTING SOLUTIONS
 WORKPLANE/CALC PLANE: AT FINISH GRADE
 MOUNTING HEIGHT: SEE LUMINAIRE SCHEDULE
 APPS: LRE
 SALES: SP

Qty	Label	Arrangement	Lumens	Input Watts	LLF	BUG Rating	Color Temp.	Description
15	SL3C	SINGLE	7570	94.6	0.799	B3-U3-G3	3500 K	STERNBERG 6130CLED/PT/6212T5-4.188/FDRB/6ARC35T3/MDL03/GFI-LPIUC/DBA/SSPA/PEC/FHC/CSA/BKT

Label	Grid Height	Avg	Max	Min	Avg/Min	Max/Min
ROADWAY	0	1.42	3.9	0.1	14.20	39.00
SIDEWALK	0	1.28	3.3	0.0	N.A.	N.A.
UNPAVED	0	0.08	3.4	0.0	N.A.	N.A.



GENERAL DISCLAIMER:
 Calculations have been performed according to IES standards and good practice. Some differences between measured values and calculated results may occur due to tolerances in calculation methods, testing procedures, component performance, measurement techniques and field conditions such as voltage and temperature variations. Input data used to generate the attached calculations such as room dimensions, reflectances, furniture and architectural elements significantly affect the lighting calculations. If the real environment conditions do not match the input data, differences will occur between measured values and calculated values.
 * LLF Determined Using Current Published Lamp Data

NOTE TO REVIEWER:
 Total Light Loss Factor (LLF) applied at time of design is determined by applying the Lamp Lumen Depreciation (LLD) from current lamp manufacturer's catalog, a Luminaire Dirt Depreciation Factor (LDD) based on IES recommended values and a Ballast Factor (BF) from current ballast specification sheets. Application of an incorrect Light Loss Factor (LLF) will result in forecasts of performance that will not accurately depict actual results.
 For proper comparison of photometric layouts, it is essential that you insist all designers use correct Light Loss Factors.

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 BROOKFIELD,
 CONNECTICUT 06804

OWNER FOR:
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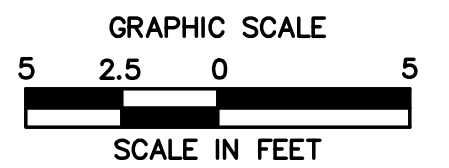
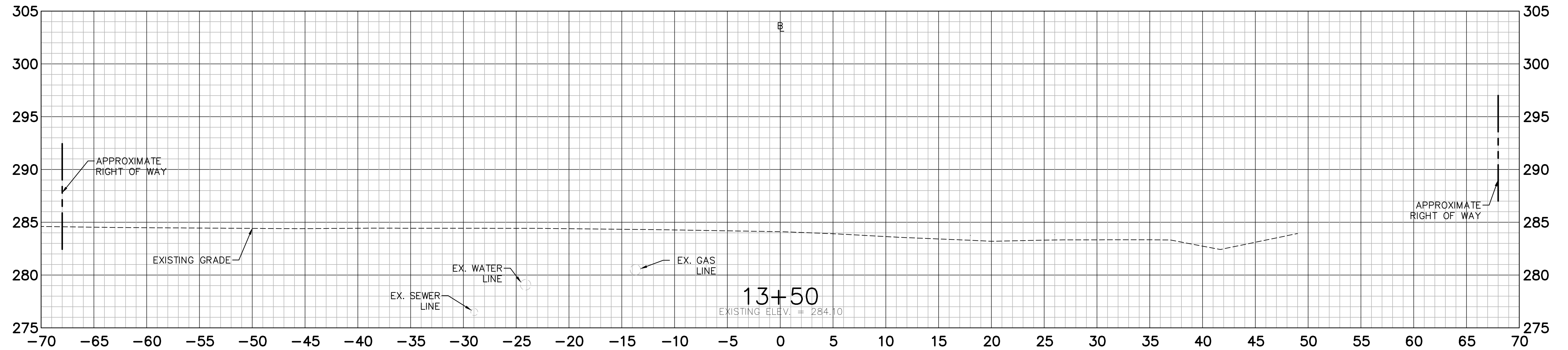
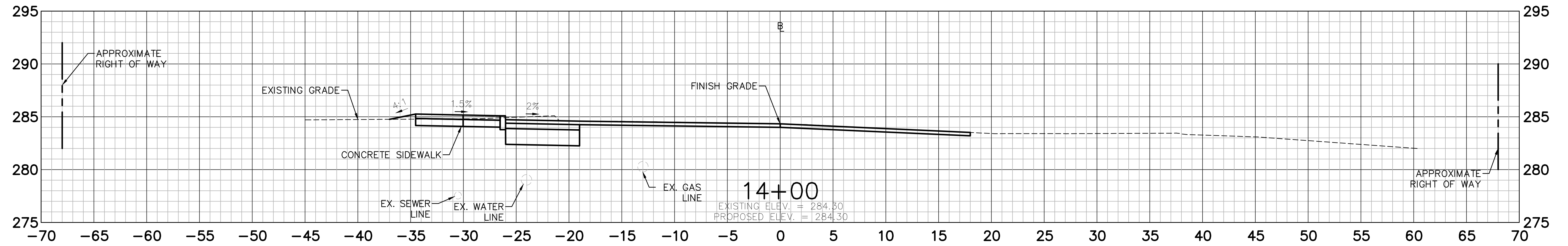
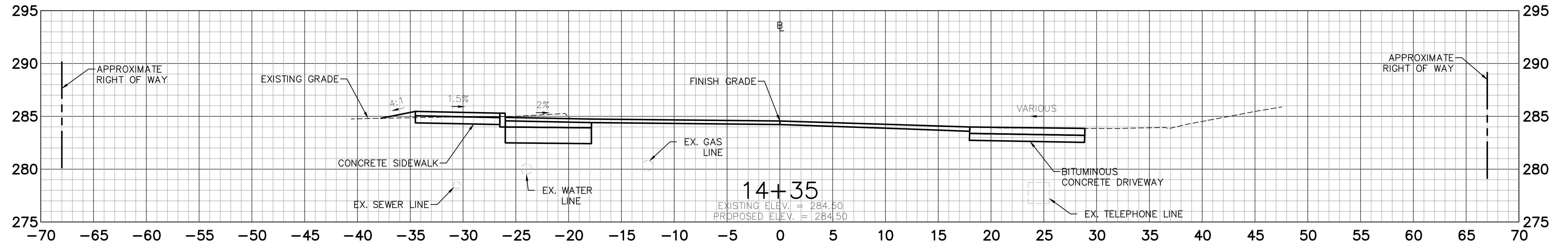
YUYANG LIN, PE, P102 NO. 23422

BROOKFIELD STREETScape Phase II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT

DESIGNED: YL	TITLE: LIGHTING PHOTOMETRIC PLAN SHEET NUMBER: LP-1
DRAFTED: APEX LIGHTING	
CHECKED: RG	
APPROVED:	
SCALE: 1" = 40'	
PROJECT NO.: 2017-0605	REVISIONS NO. DATE DESCRIPTION
DATE: 11/15/2017	
FILE: HWL_MST_2017_0605_LP-1	

Freeman Companies, LLC - R:\2017\2017-0605_Brookfield Streetscape Phase 2\DWG\HWL_MST_2017_0605_LP-1.dwg Jan 15, 2019 - 5:09pm Plotted By: ptabkur

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TSYANG LIN, PE, PTOE NO. 23422

NO.	DATE	DESCRIPTION

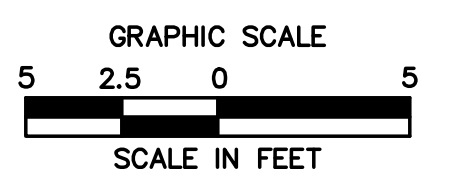
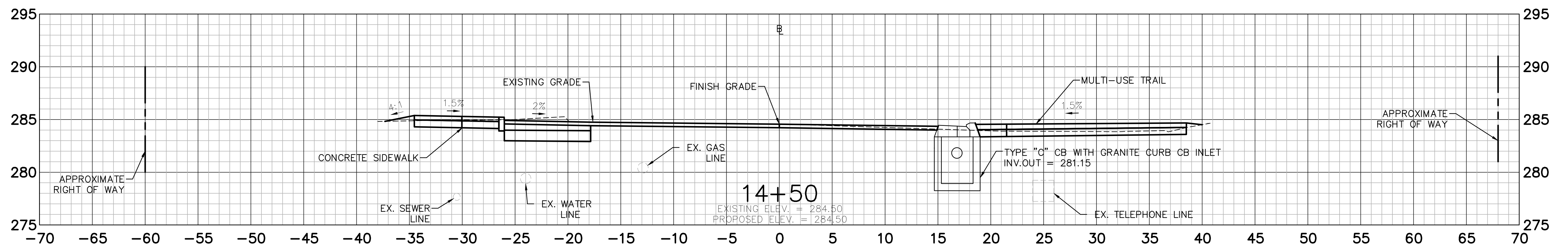
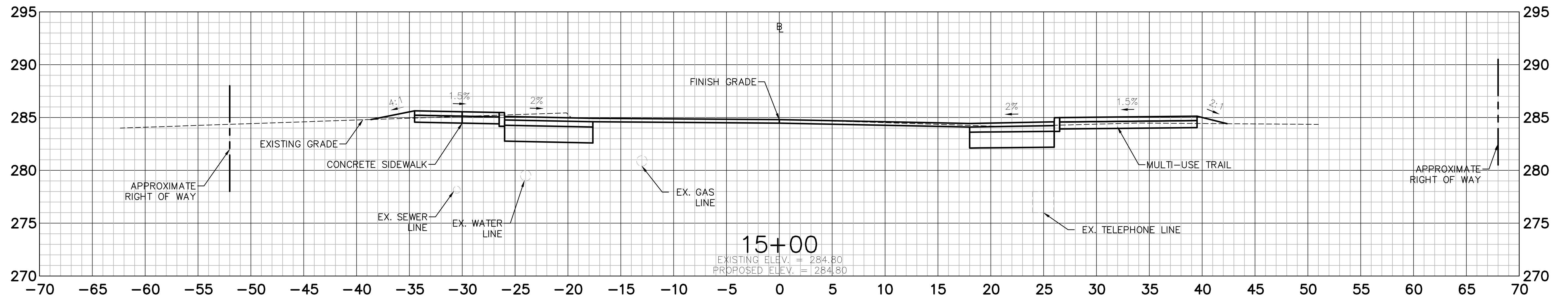
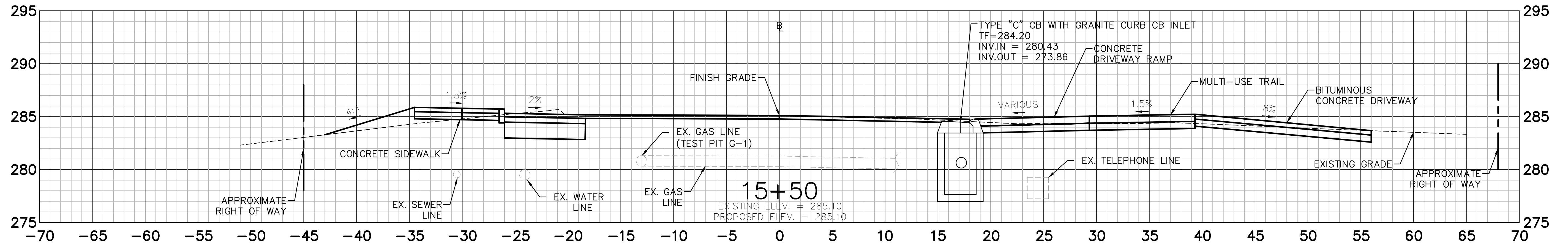
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CHECKED: RG
APPROVED:
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PROJECT NO.: 2017-0605
DATE: 06/04/2018
FILE: HW_MST_2017_0605_CS_FD

TITLE:
CROSS SECTION

SHEET NUMBER:
XSC-1

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TSYANG LIN, PE, PTOE
 NO. 23422

NO.	DATE	DESCRIPTION

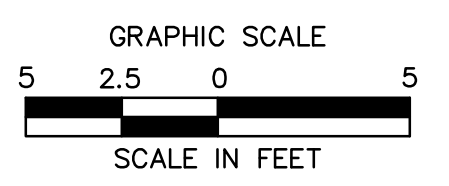
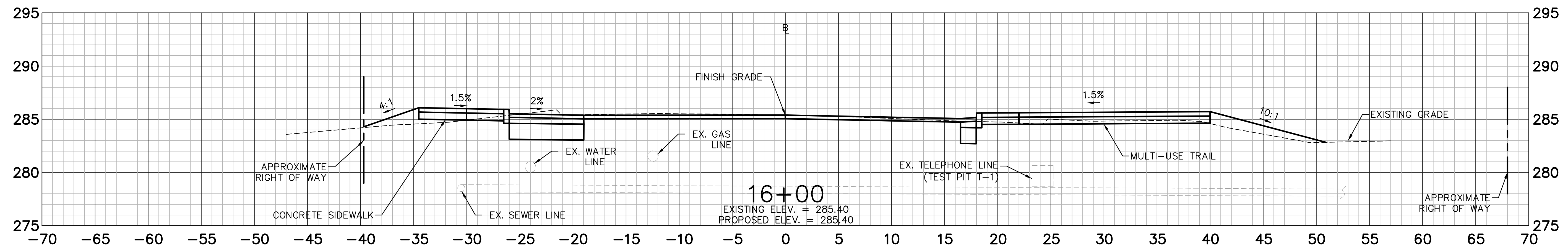
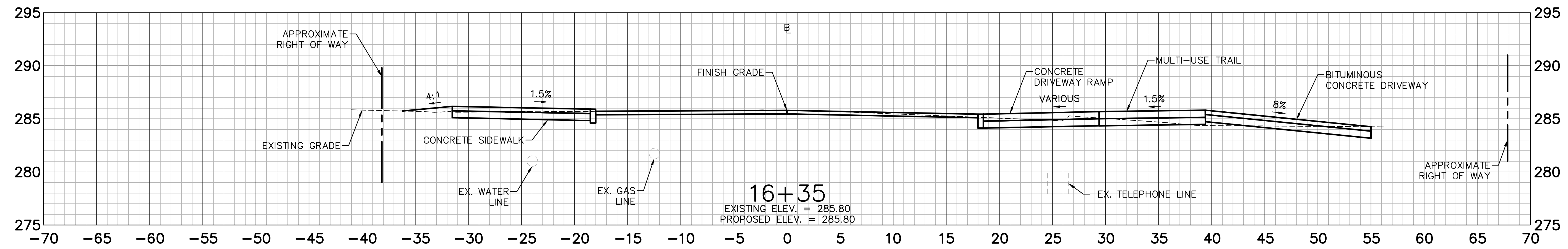
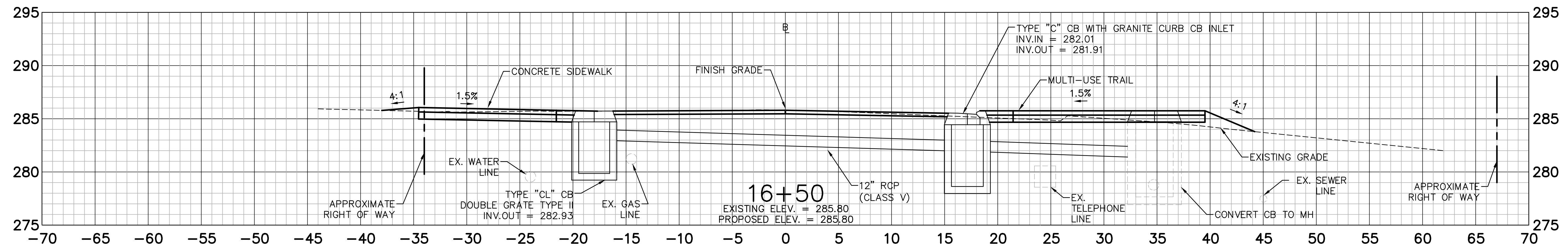
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TITLE:
CROSS SECTION

SHEET NUMBER:
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TYIANG LIN, PE, P10X NO. 23422

BROOKFIELD STREETScape PHASE II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT

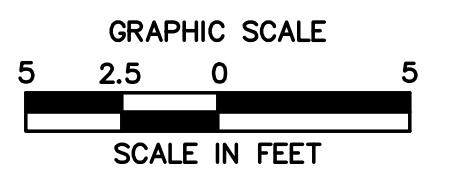
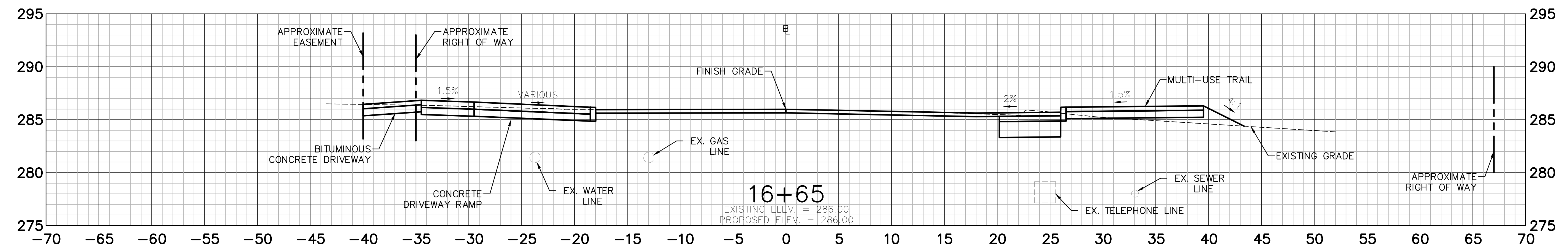
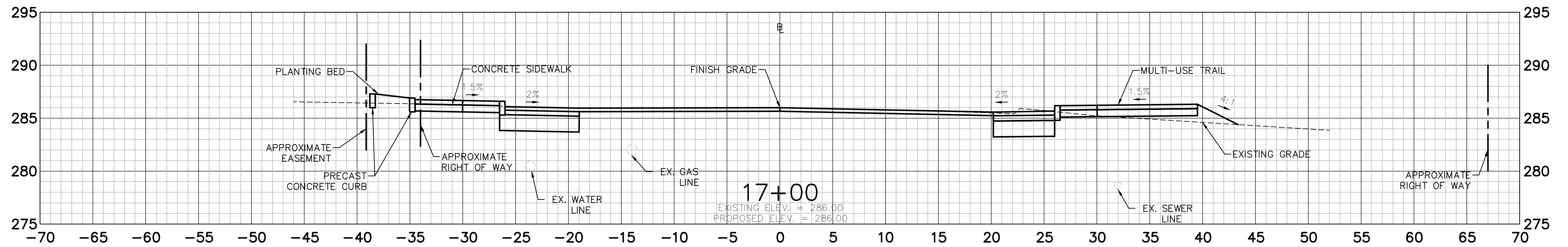
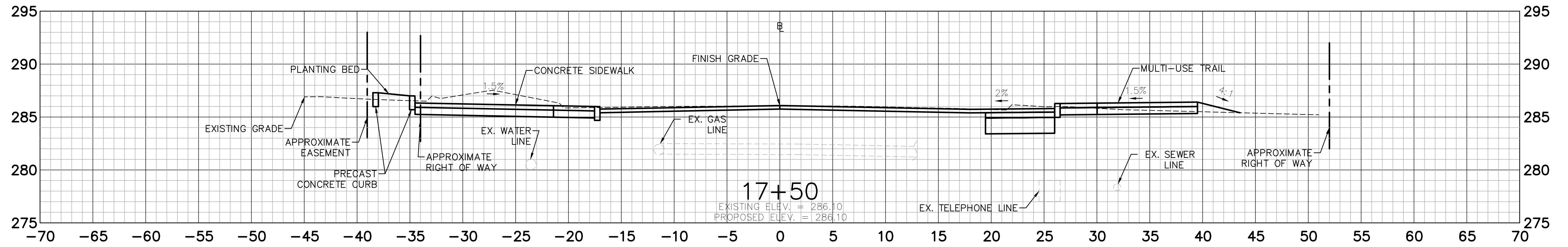
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 PROJECT NO.: 2017-0605
 DATE: 06/04/2018
 FILE: HW_MST_2017_0605_CS_FD

TITLE:
CROSS SECTION

SHEET NUMBER:
XSC-3

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BROOKFIELD STREETSCAPE PHASE II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT



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TOWN OF BROOKFIELD
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BROOKFIELD,
CONNECTICUT 06804

TSUYANG LIN, PE, PTOE NO. 23422

NO.	DATE	DESCRIPTION

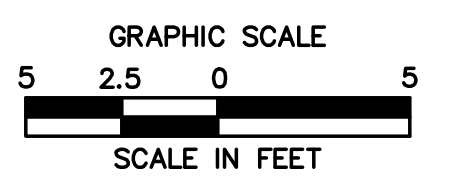
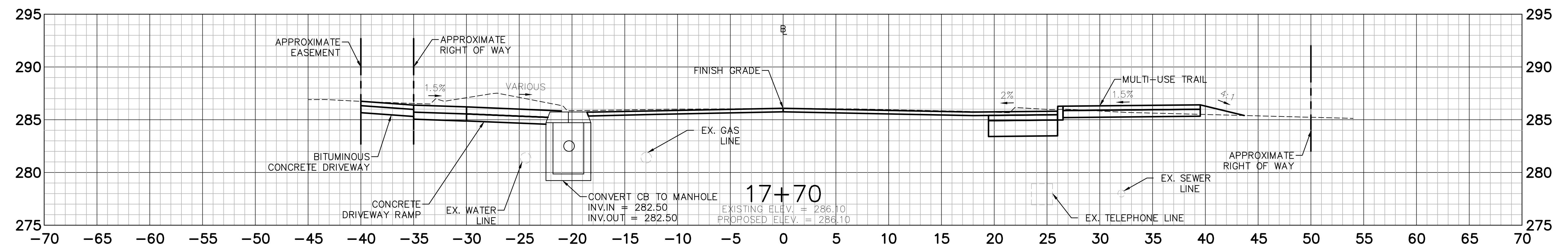
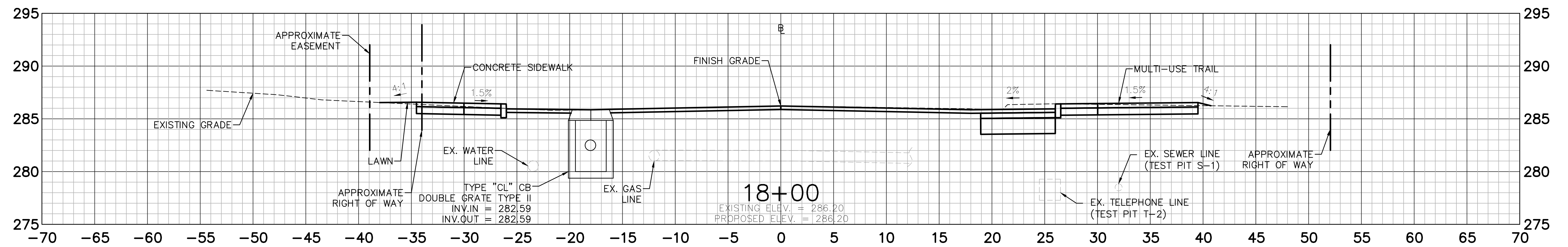
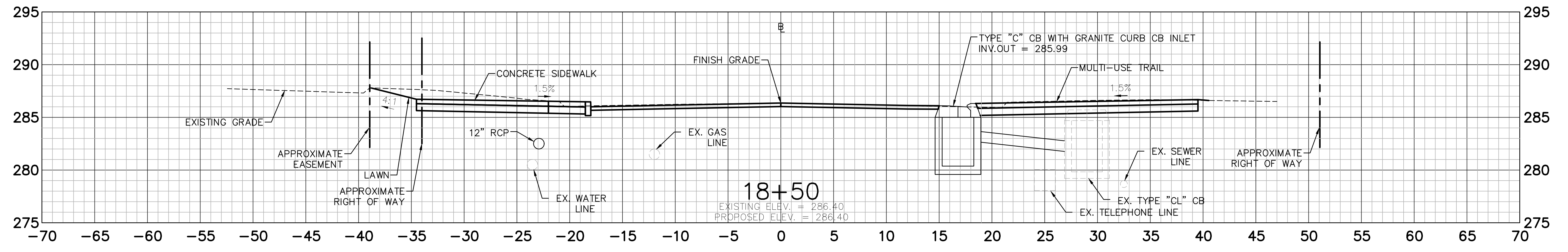
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CHECKED: RG
APPROVED: _____
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DATE: 06/04/2018
FILE: HWL_MST_2017_0605_CS_FD

TITLE:
CROSS SECTION

SHEET NUMBER:
XSC-4

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TSYANG LIN, PE, P10X NO. 23422

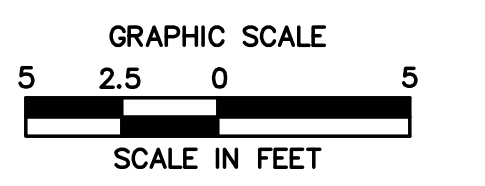
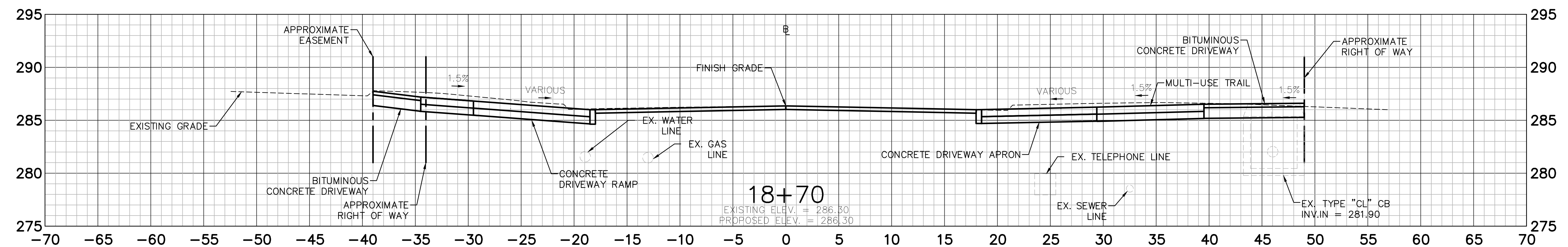
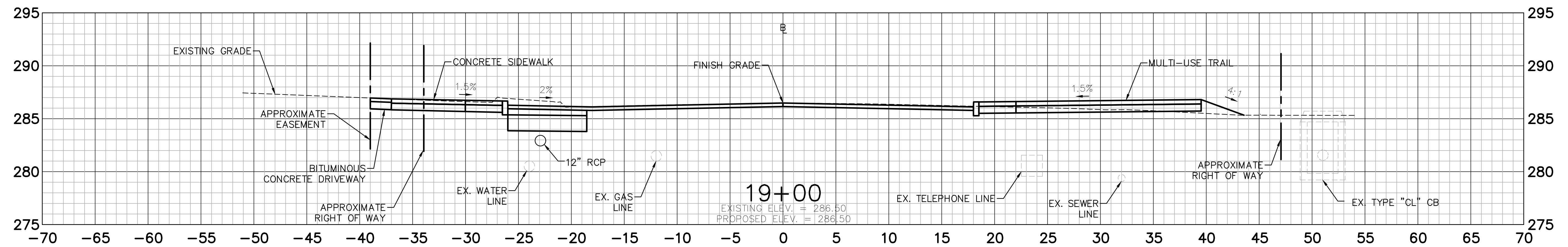
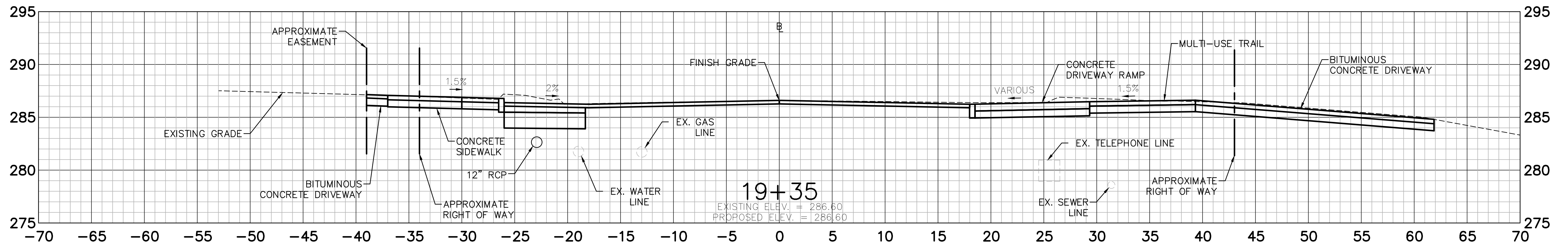
BROOKFIELD STREETSCAPE PHASE II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT

NO.	DATE	DESCRIPTION

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DRAFTED:	PT
CHECKED:	RG
APPROVED:	
SCALE:	1" = 5'
PROJECT NO.:	2017-0605
DATE:	06/04/2018
FILE:	HW_MST_2017_0605_CS_FD

TITLE:	CROSS SECTION
SHEET NUMBER:	XSC-5

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 CONNECTICUT 06804

15YANG UN, PE, P10X NO. 23422

NO.	DATE	DESCRIPTION

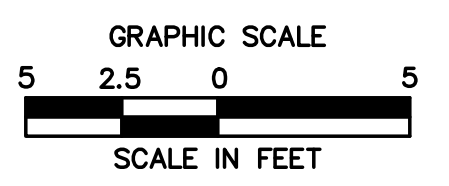
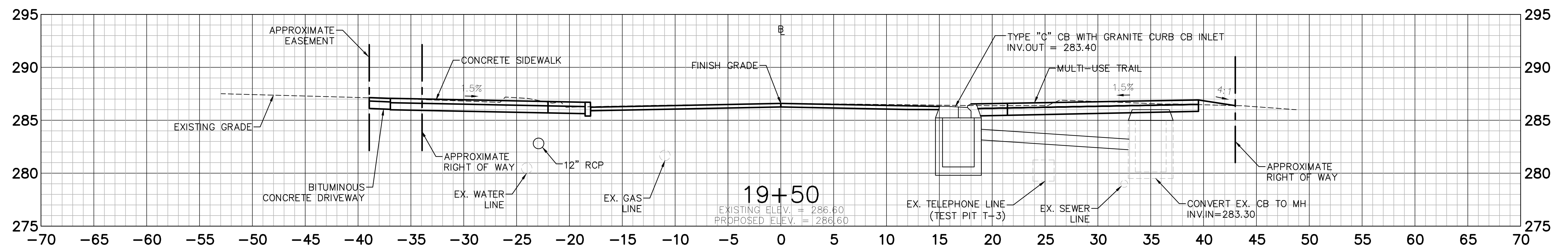
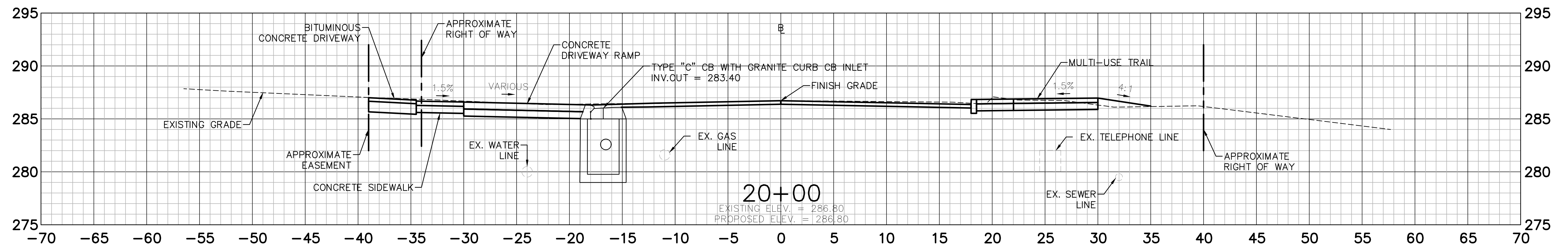
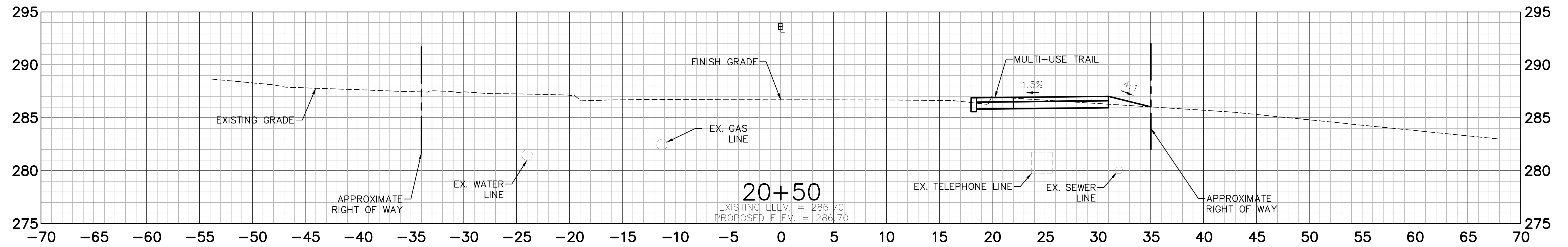
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 DRAFTED: PT
 CHECKED: RG
 APPROVED:
 SCALE: 1" = 5'
 PROJECT NO.: 2017-0605
 DATE: 06/04/2018
 FILE: HW_MST_2017_0605_CS_FD

TITLE:
CROSS SECTION

SHEET NUMBER:
XSC-6

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BROOKFIELD,
CONNECTICUT 06804

TSUYANG LIN, PE, PTOE NO. 23422

NO.	DATE	DESCRIPTION

DESIGNED: YL
DRAFTED: PT
CHECKED: RG
APPROVED:
SCALE: 1" = 5'
PROJECT NO.: 2017-0605
DATE: 06/04/2018
FILE: HW_MST_2017_0605_CS_FD

TITLE:
CROSS SECTION

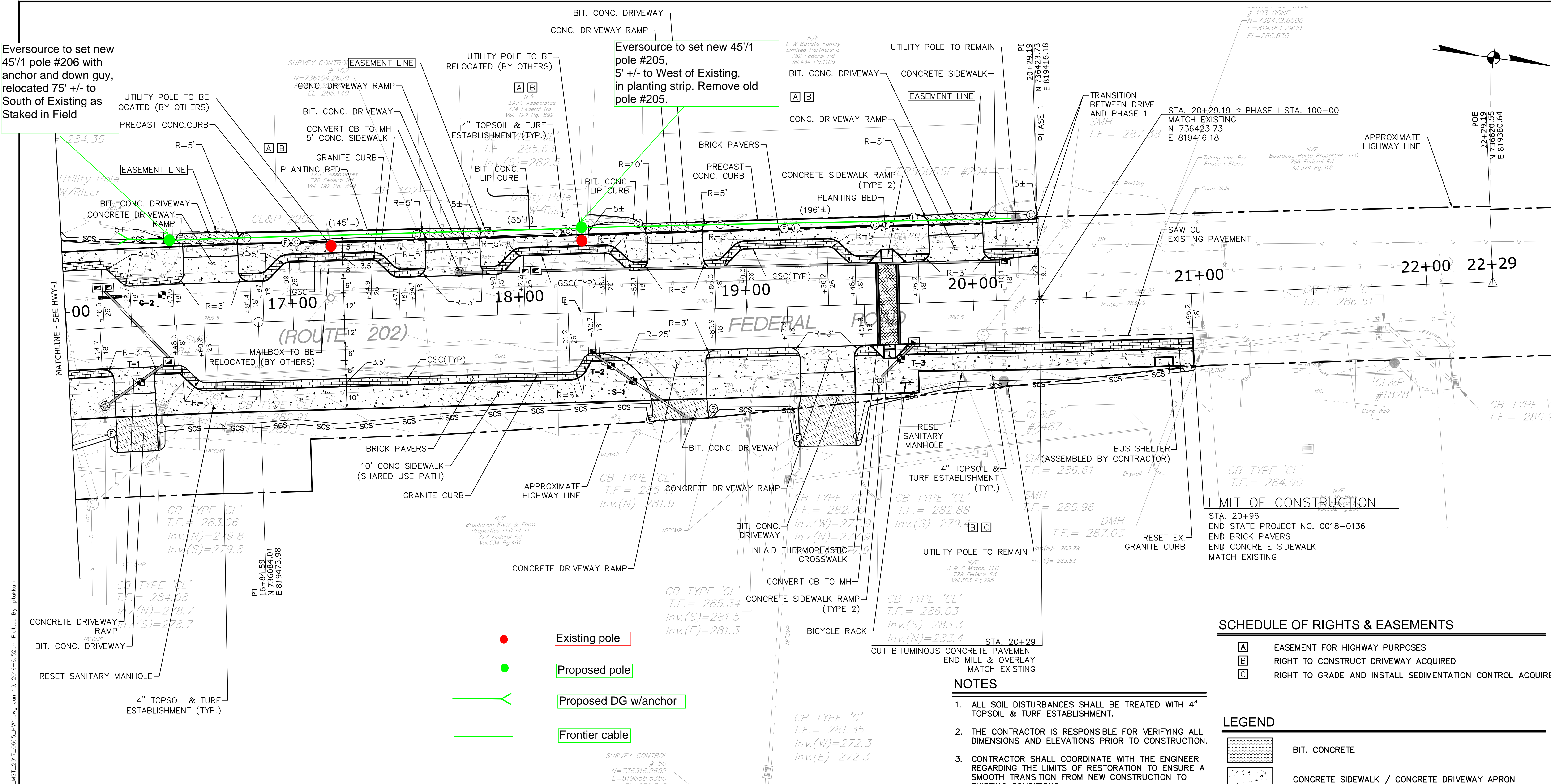
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Freeman Companies, LLC - R:\2017\2017-0605 Brookfield Streetscape Phase 2\DWG\HW_MST_2017_0605_CS_FD.dwg Jun 16, 2018 11:00am Plotted By: plakur

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Eversource to set new 45/1 pole #206 with anchor and down guy, relocated 75' +/- to South of Existing as Staked in Field

Eversource to set new 45/1 pole #205, 5' +/- to West of Existing, in planting strip. Remove old pole #205.



Freeman Companies, LLC - R:\2017\2017-0605_Brookfield Streetscape Phase 2\DWG\HWY_MST_2017_0605_Hwy.dwg, Jan 10, 2019 - 8:52am, Plotted By: ptkhuri

- Existing pole
- Proposed pole
- Proposed DG w/anchor
- Frontier cable

Eversource Relocation Plan

Submitted 1/14/2019
Submitted by Eversource
Engineer Mikulak Alfreda
alfreda.mikulak@eversource.com
(860) 496-5114

FOR INFORMATION ONLY

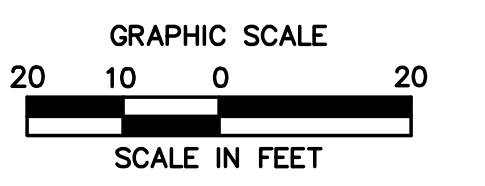
BROOKFIELD STREETSCAPE PHASE II ROUTE 202 (FEDERAL ROAD) BROOKFIELD, CONNECTICUT

SCHEDULE OF RIGHTS & EASEMENTS

- A EASEMENT FOR HIGHWAY PURPOSES
- B RIGHT TO CONSTRUCT DRIVEWAY ACQUIRED
- C RIGHT TO GRADE AND INSTALL SEDIMENTATION CONTROL ACQUIRED

LEGEND

- BIT. CONCRETE
- CONCRETE SIDEWALK / CONCRETE DRIVEWAY APRON
- BRICK PAVERS
- TEST PIT
- FILL/CUT APPROXIMATE SLOPE LIMITS
- SEDIMENTATION CONTROL SYSTEM
- WETLANDS
- HIGHWAY LINE
- EASEMENT LINE



WATER (AQUARIUM)									
TEST PIT #	BASELINE		NORTHING	EASTING	GROUND ELEVATION (FT)	TOP OF PIPE ELEVATION (FT)	TOP OF UTILITY ELEVATION (FT)	DESCRIPTION	RELOCATION ANTICIPATED
	STATION	OFFSET							
G-2	16+43	17.00 LT	736040.085	819464.430	285.80±	281.35±	282.30±	12" PIPE	NO
TELEPHONE									
T-1	16+31	24.00 RT	736035.300	819507.076	285.80±	280.75±	281.80±	24" PIPE	NO
T-2	18+40	23.00 RT	736240.659	819470.655	286.40±	282.84±	282.40±	24" PIPE	NO
T-3	19+65	24.00 RT	736364.408	819450.618	286.60±	283.32±	282.60±	24" PIPE	NO
SANITARY SEWER									
S-1	18+50	30.00 RT	736251.168	819475.956	286.40±	282.60±	279.40±	8" PIPE	NO

FREEMAN COMPANIES
34 JOHN STREET
HARTFORD, CT 06106
WWW.FREEMANCO.COM
860.531.9500
TOLL FREE (800)604-5141
FAX (860)606-7161
ELEVATE YOUR EXPECTATIONS

PREPARED FOR
TOWN OF BROOKFIELD
100 POCOCK ROAD
BROOKFIELD, CONNECTICUT 06804

OWNER FOR
TOWN OF BROOKFIELD
100 POCOCK ROAD
BROOKFIELD, CONNECTICUT 06804

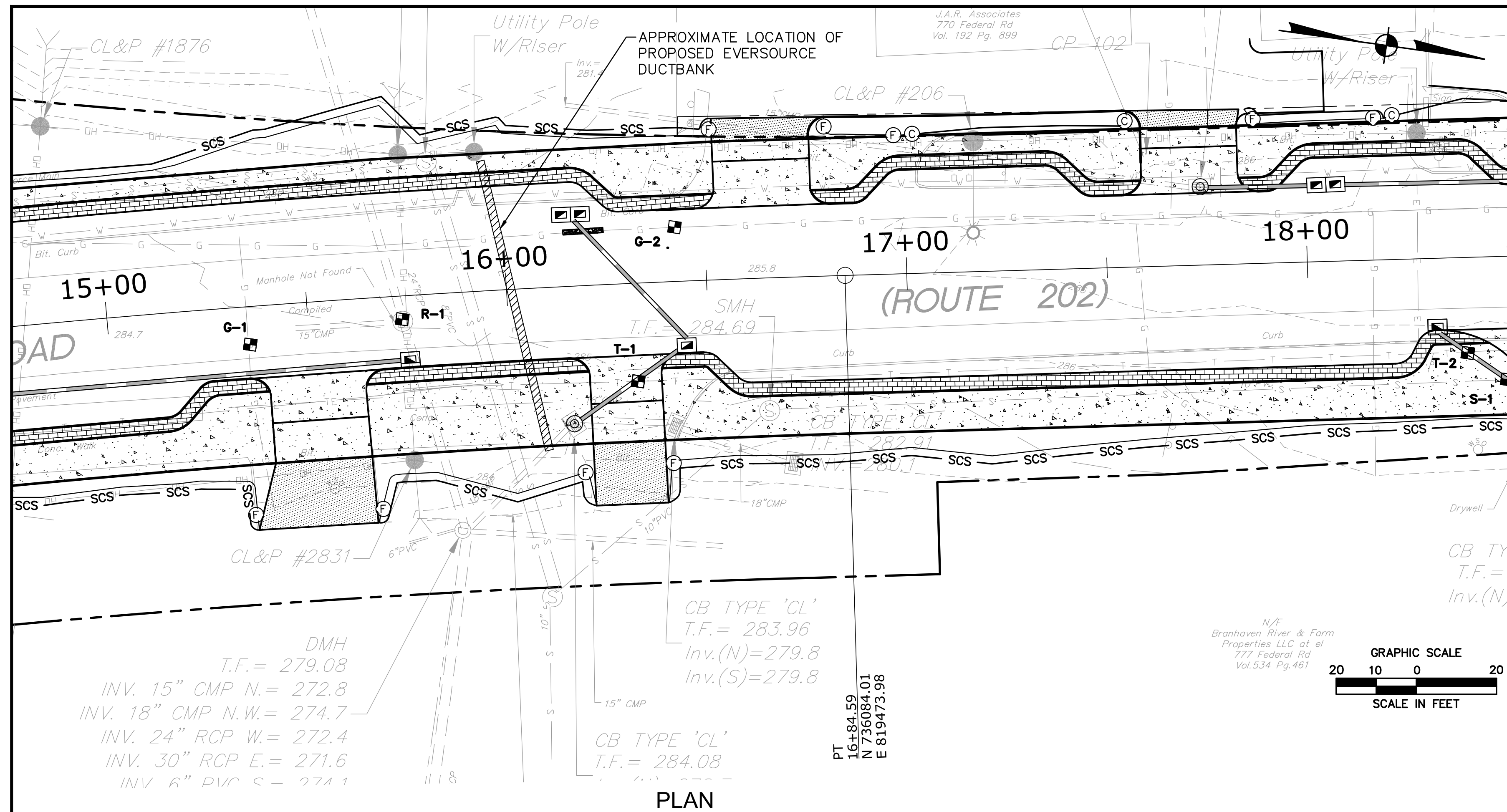
NO. 23422

DESIGNED: YL
DRAFTED: PT
CHECKED: RG
APPROVED:
SCALE: AS NOTED
PROJECT NO.: 2017-0605
DATE: 10/30/2018
FILE: HWY_MST_2017_0605_HWY

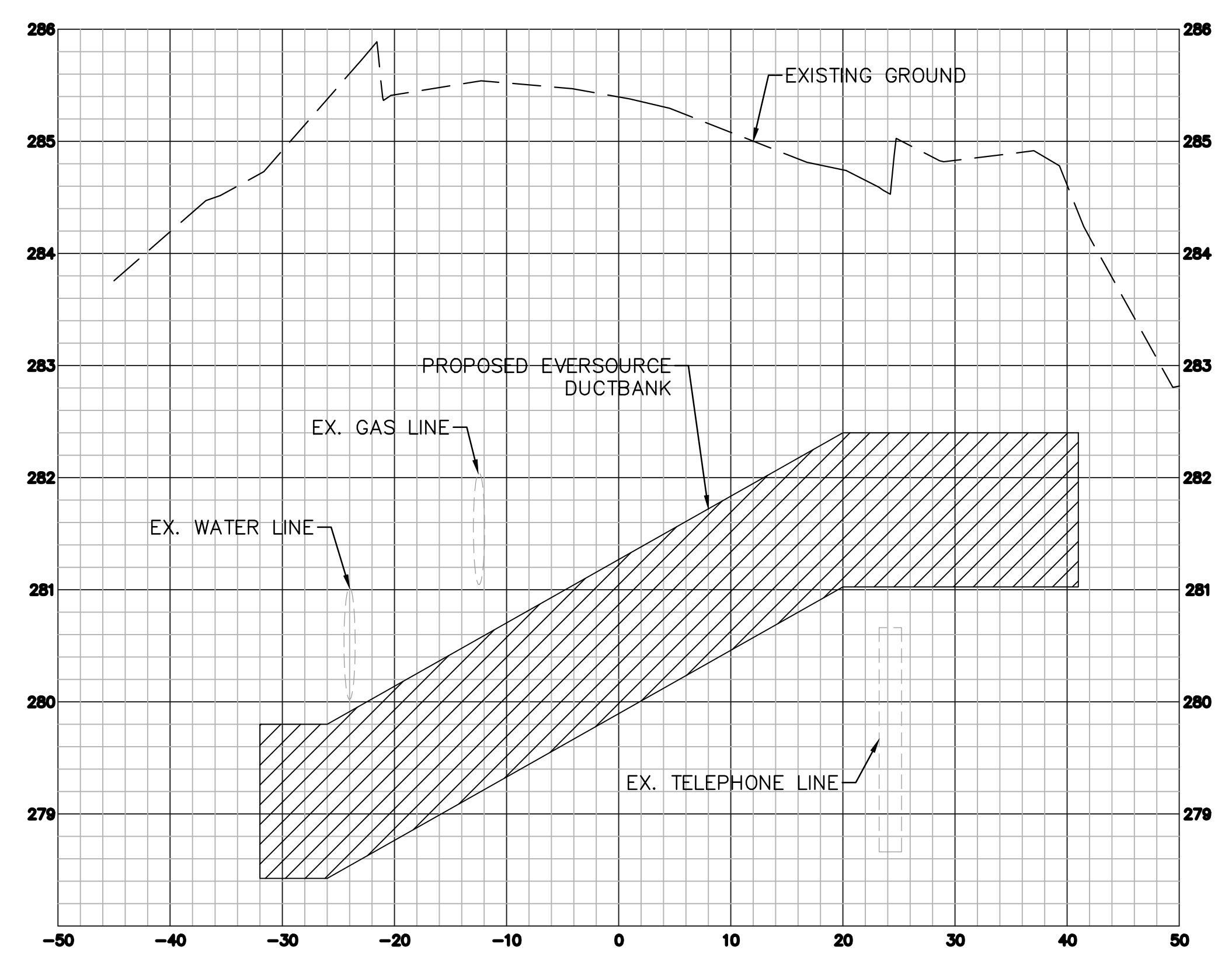
TITLE:
ROADWAY PLAN
SHEET NUMBER:
HWY-2

NO.	DATE	DESCRIPTION

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF FREEMAN COMPANIES, LLC



PLAN



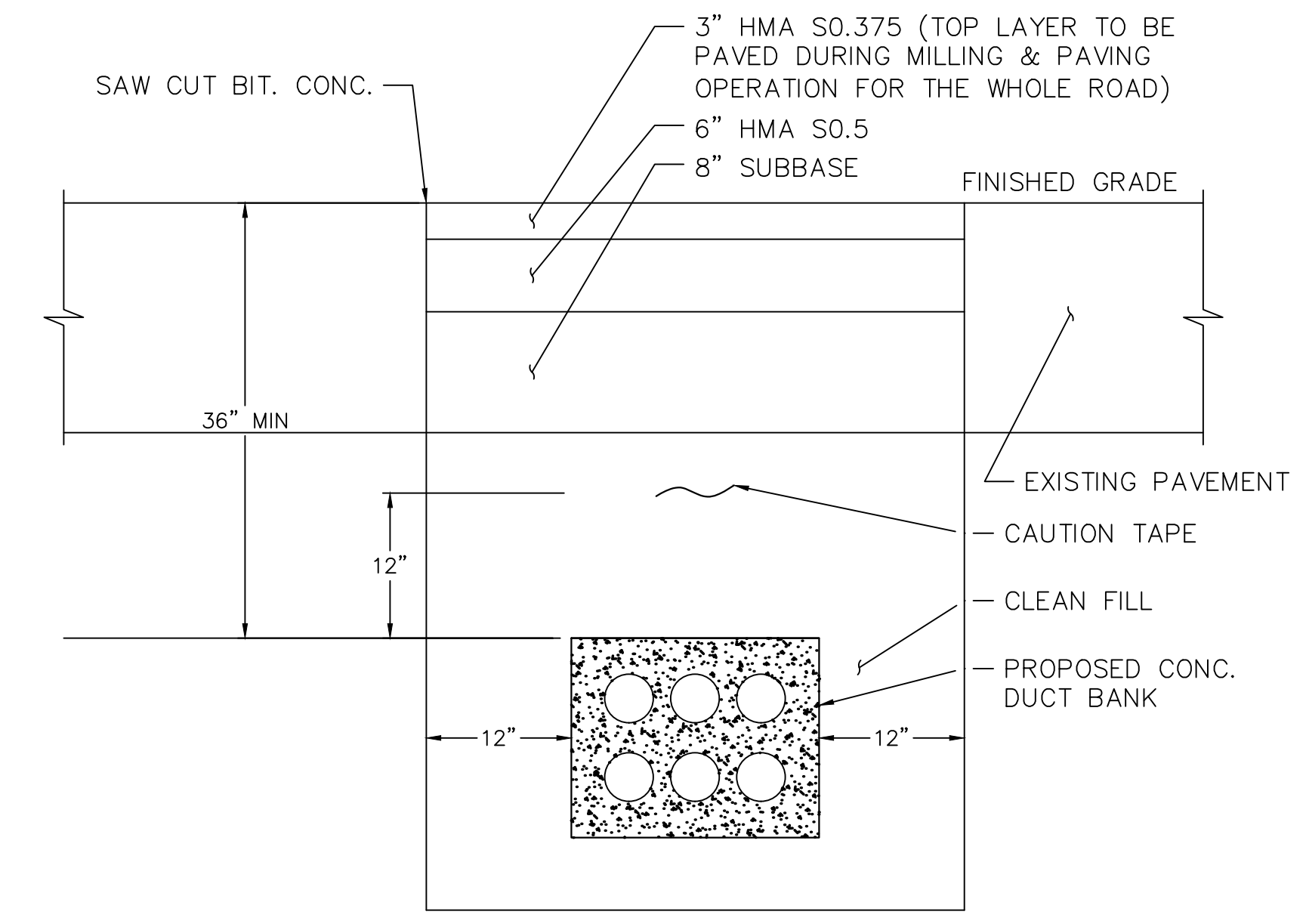
PROFILE
HOR. SCALE: 1"=10'
VERT. SCALE: 1"=1'

NOTES

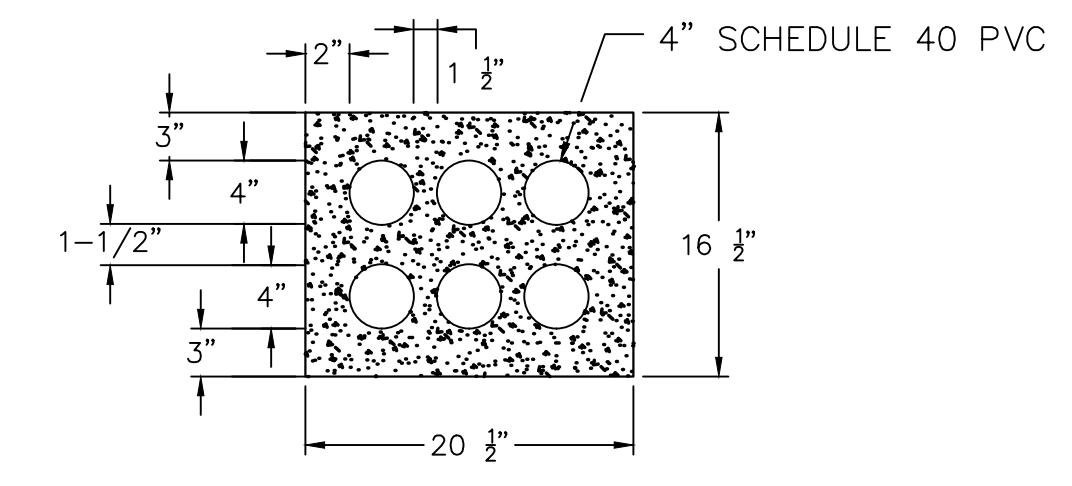
1. INFORMATION ON EXISTING UTILITIES HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY AND MUNICIPAL RECORD MAPS AND FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE. THE CONTRACTOR AND/OR RESPONSIBLE PARTY IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES INCLUDING SERVICES. PRIOR TO CONSTRUCTION, CONTACT "CALL BEFORE YOU DIG" AT 1-800-922-4455" A MINIMUM OF 72 HOURS TO CONSTRUCTION AND VERIFY ALL UNDERGROUND AND OVERHEAD UTILITY LOCATIONS.
2. THE LOCATION OF THE DUCT BANK SHOWN ON THE PLAN IS APPROXIMATE AND THE OWNER IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATION DURING CONSTRUCTION.
3. PROPER COMMUNICATION WITH THE RESPECTIVE UTILITY COMPANY SHALL BE PERFORMED BY THE CONTRACTOR TO ENSURE THAT ALL UTILITY COMPANIES AND TOWN OF BROOKFIELD STANDARDS FOR MATERIAL AND CONSTRUCTION METHODS ARE MET.
4. THE CONTRACTOR SHALL ARRANGE AND COORDINATE WITH UTILITY COMPANIES AND THE TOWN OF BROOKFIELD FOR WORK TO BE PERFORMED BY UTILITY COMPANIES OR BY THE TOWN OF BROOKFIELD.
5. ALL DISTURBANCE INCURRED TO TOWN OF BROOKFIELD OR STATE PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWN OF BROOKFIELD OR STATE OF CONNECTICUT AUTHORITY.
6. REFER TO SPECIAL PROVISION ITEM NO. 1500123A FOR ADDITIONAL INFORMATION.

INSTALLATION IN TRENCH

1. ENSURE THAT THE BOTTOM OF THE TRACH IS WELL-TAMPED AND FREE OF ROCKS.
2. INSTALL THE CONDUIT, GLUING ALL COUPLING.
3. INSTALL SECONDARIES AND OTHER UTILITY CABLE OR CONDUITS IN THE TRENCH.
4. BACKFILL WITH CLEAN FILL NOT TO CONTAIN STONES LARGER THAN TWO INCHES IN MAXIMUM DIAMETER.
5. INSTALL CABLE WARING TAPE 12" OVER THE DUCT.
6. INSTALL PULL LINE, INCLUDING 10 FEET OF SLACK, AND SECURE TO CONDUIT PLUG AT EACH END OF CONDUIT RUN.



CROSS SECTION OF TRENCH
SCALE: 1"=1'



CROSS SECTION OF CONCRETE DUCT BANK
SCALE: 1"=1'

BID ALTERNATE No. 1
NON-PARTICIPATING

BROOKFIELD STREETSCAPE PHASE II
ROUTE 202 (FEDERAL ROAD)
BROOKFIELD, CONNECTICUT

FREEMAN COMPANIES
DBE | DAS | ABE | GNASDC CERTIFIED
CIVIL | GEOTECHNICAL | SURVEY | ENVIRONMENTAL
36 JOHN STREET
HARTFORD, CT 06106
WWW.FREEMANCO.COM
TOLL FREE: (800)604-5141
FAX: (860)966-7151
ELEVATE YOUR EXPECTATIONS

PREPARED FOR
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100 POCONO ROAD
BROOKFIELD,
CONNECTICUT 06804
OWNER FOR
TOWN OF BROOKFIELD
100 POCONO ROAD
BROOKFIELD,
CONNECTICUT 06804
TUYANG LIN, PE, P102 NO. 23422

DESIGNED:	YL
DRAFTED:	PT
CHECKED:	RG
APPROVED:	
SCALE:	AS NOTED
PROJECT NO.:	2017-0605
DATE:	10/30/2018
FILE:	Duct Plan

TITLE:
UTILITY DUCT BANK PLAN
SHEET NUMBER:
ALT-1

Freeman Companies, LLC - R:\2017\2017-0605 Brookfield Streetscape Phase 2\DWG\Duct Plan.dwg Jun. 21, 2019 - 12:15pm Plotted By: plakauri

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF FREEMAN COMPANIES, LLC

*ONLY STANDARD SHEETS MARKED WITH AN "✓" ARE IN THIS PROJECT #

**REVISED OR ADDED

✓*	SHEET NO.	TITLE	APPROVAL DATE**
	HW-506_01	ENDWALLS, SLOPE PAVED INLETS AND OUTLETS	1-26-12
	HW-506_02	TYPE "D-G" & "L" ENDWALLS	7-13-12
	HW-506_03	ENDWALLS FOR PIPE ARCH	9-18-09
	HW-507_01	TYPE "C", "C-L" & DROP INLET CATCH BASIN	7-24-13
	HW-507_02	TYPE "C", "C-L" & DOUBLE GRATE TYPE - I	7-24-13
	HW-507_03	TYPE "C", "C-L" & DOUBLE GRATE TYPE - II	7-24-13
	HW-507_04	TYPE "C", "C-L" & ROUND PRECAST CONCRETE CB	11-10-11
	HW-507_05	TYPE "C" & "C-L" PRECAST CONCRETE CB DOUBLE GRATE TYPE - I	11-10-11
	HW-507_06	TYPE "C" & "C-L" PRECAST CONCRETE CB DOUBLE GRATE TYPE - II	11-10-11
	HW-507_07	TYPE "C" & "C-L" CATCH BASIN TOPS AND CURBS	11-10-11
	HW-507_08	CATCH BASIN FRAMES AND GRATES	9-18-09
	HW-507_09	HEAVY DUTY LOCK DOWN TOPS	7-12-12
	HW-507_10	MANHOLE - FRAME & COVER	7-24-13
	HW-651_01	C.C.M. PIPE INSTALLATIONS IN FILL & ROCK SLOPES & PIPE TRENCH DETAIL	7-24-13
	HW-651_02	SLOTTED DRAIN PIPE 12"- 15"-18"-24"-30" (305-381-457-610-762)	7-12-12
	HW-652_01	PIPE ENDS	7-24-13
	HW-751_01	UNDERDRAINS AND UNDERDRAIN OUTLETS	7-12-12
	HW-803_01a	PAVED APRONS	6-07-17
	HW-803_01b	PAVED DITCHES AND PAVED CHANNELS	6-07-17
	HW-811_01	CONCRETE CURBING	6-07-17
	HW-813_01	GRANITE STONE TRANSITION CURBING	7-24-13
	HW-813_02	STONE CURBING	6-07-17
	HW-815_01	BITUMINOUS CONCRETE CURBING	6-07-17
	HW-821_01a	TRANSITION - 45" (1145) F-SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 1	1-26-12
	HW-821_01b	TRANSITION - 45" (1145) F-SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 2	10-18-10
	HW-821_01c	TRANSITION - 45" (1145) F-SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 3	1-26-12
	HW-821_02a	45" (1145) F-SHAPE PRECAST CONCRETE BARRIER CURB SHEET 1	7-24-13
	HW-821_02b	45" (1145) F-SHAPE PRECAST CONCRETE BARRIER CURB SHEET 2	7-24-13
	HW-821_03a	TRANSITION - 32" (813) JERSEY SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 1	1-26-12
	HW-821_03b	TRANSITION - 32" (813) JERSEY SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 2	10-18-10
	HW-821_03c	TRANSITION - 32" (813) JERSEY SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 3	10-18-10
	HW-821_03d	TRANSITION - 32" (813) JERSEY SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 4	10-18-10
	HW-821_03e	TRANSITION - 32" (813) JERSEY SHAPE TO 45" (1145) F-SHAPE	7-24-13

✓*	SHEET NO.	TITLE	APPROVAL DATE**
	HW-821_04a	MERRITT PARKWAY NARROW MEDIAN BARRIER	6-09-11
	HW-821_04b	MERRITT PARKWAY - 2' (610) WIDE MEDIAN BARRIER AND ROADSIDE BARRIER	7-24-13
	HW-821_05a	TRANSITION - 45" (1145) F-SHAPE TO 54" (1372) VERTICAL SHAPE SHEET 1	1-26-12
	HW-821_05b	TRANSITION - 45" (1145) F-SHAPE TO 54" (1372) VERTICAL SHAPE SHEET 2	1-26-12
	HW-821_06	54" (1372) VERTICAL SHAPE BARRIER	2-06-12
	HW-821_07	MISCELLANEOUS DETAILS FOR BARRIER TRANSITIONS	7-12-12
	HW-822_01	TEMPORARY PRECAST CONCRETE BARRIER CURB	7-24-13
	HW-905_01	STONE WALL, FARM WALL AND WIRE FENCES	6-07-17
	HW-910_01	W-BEAM METAL BEAM RAIL HARDWARE	6-09-11
	HW-910_02	METAL BEAM RAIL (TYPE R-B 350) GUIDERAIL	6-09-11
	HW-910_03	METAL BEAM RAIL (TYPE MD-B 350)	6-09-11
	HW-910_04	METAL BEAM RAIL (TYPE R-B 350) SYSTEMS 5, 5A, & 6	6-09-11
	HW-910_05	METAL BEAM RAIL R-B 350 SPAN TYPE I, II, III SECTIONS	7-24-13
	HW-910_06	R-B 350 BRIDGE ATTACHMENT SAFETY SHAPE PARAPET	6-09-11
	HW-910_07	R-B 350 BRIDGE ATTACHMENT VERTICAL SHAPE PARAPET	6-09-11
	HW-910_08	R-B 350 BRIDGE ATTACHMENT TRAILING END	6-09-11
	HW-910_09a	MISCELLANEOUS GUIDERAIL TRANSITIONS SHEET 1	1-26-12
	HW-910_09b	MISCELLANEOUS GUIDERAIL TRANSITIONS SHEET 2	7-25-12
	HW-910_10	METAL BEAM RAIL 8" (203) X 6" (152) BOX BEAM	7-24-13
	HW-910_11	CURVED GUIDERAIL TREATMENT DETAIL	7-25-12
	HW-910_12a	MERRITT PARKWAY GUIDERAIL ATTACHMENT - SYSTEM 2 & 3	7-24-13
	HW-910_12b	MERRITT PARKWAY GUIDERAIL	7-24-13
	HW-910_12c	MERRITT PARKWAY GUIDERAIL TRAILING END ATTACHMENTS	7-24-13
	HW-910_12d	MERRITT PARKWAY MEDIAN GUIDERAIL AND END ANCHOR	6-09-11
	HW-910_13a	THRIE-BEAM METAL BEAM RAIL HARDWARE	7-24-13
	HW-910_13b	THRIE-BEAM TRANSITIONS	7-24-13
	HW-910_14a	THRIE-BEAM 350 BRIDGE ATTACHMENT	6-09-11
	HW-910_14b	THRIE-BEAM 350 GUIDERAIL TRANSITION TO R-B 350 GUIDERAIL	6-09-11
	HW-910_15	MD-B 350 MEDIAN BARRIER SAFETY SHAPE ATTACHMENT TYPE I	6-09-11
	HW-910_16	MD-B 350 MEDIAN BARRIER SAFETY SHAPE ATTACHMENT TYPE II	6-09-11
	HW-910_17	R-B TERMINAL SECTION	7-24-13
	HW-910_18	METAL BEAM RAIL (TYPE MD-I)	10-18-10
	HW-910_19a	METAL BEAM RAIL (MODIFIED TYPE R-I) AND END ANCHORAGE TYPE I	7-24-13

Filename: CTDOT-HIGHWAY-STD (9-13-17 to be poMed)(1)IdgrHW-INX.1

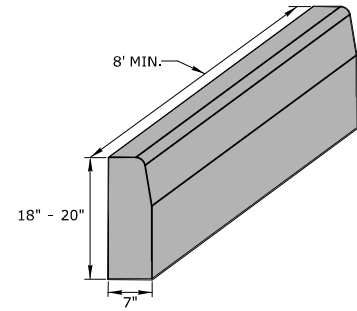
*ONLY STANDARD SHEETS MARKED WITH AN "✓" ARE IN THIS PROJECT #

**REVISED OR ADDED

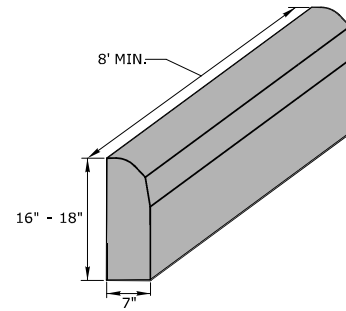
✓*	SHEET NO.	TITLE	APPROVAL DATE**	✓*	SHEET NO.	TITLE	APPROVAL DATE**
	HW-910_19b	METAL BEAM RAIL (MODIFIED TYPE R-I) AND END ANCHORAGE TYPE II	7-24-13				
	HW-910_19c	METAL BEAM RAIL (MODIFIED TYPE R-I) SYSTEMS 2 AND 3	7-24-13				
	HW-910_20	MASH W-BEAM HARDWARE	1-05-18				
	HW-910_21	METAL BEAM RAIL (R-B MASH) GUIDERAIL	1-05-18				
	HW-910_22	METAL BEAM RAIL (MD-B MASH) GUIDERAIL	1-05-18				
	HW-910_23	METAL BEAM RAIL (R-B MASH) HALF AND QUARTER POST SPACING	1-05-18				
	HW-910_24	METAL BEAM RAIL SPAN SECTION TYPES II AND III	1-05-18				
	HW-910_25	METAL BEAM RAIL TRANSITION 350 TO MASH	1-05-18				
	HW-911_01	R-B END ANCHORAGE TYPE I AND II	1-05-18				
	HW-911_02	MD-B END ANCHORAGE TYPE I	1-05-18				
	HW-911_03	ANCHOR IN EARTH CUT SLOPE & ANCHOR IN ROCK CUT SLOPE	10-18-10				
	HW-911_05	MERRITT PARKWAY GUIDERAIL END ANCHORS	7-24-13				
	HW-913_01	CHAIN LINK FENCE	7-12-12				
	HW-918_01a	THREE CABLE GUIDERAIL (I-BEAM POSTS) SHEET 1	7-24-13				
	HW-918_01b	THREE CABLE GUIDERAIL (I-BEAM POSTS) SHEET 2	1-26-12				
	HW-918_01c	THREE CABLE GUIDERAIL (I-BEAM POSTS) SHEET 3	7-24-13				
	HW-921_01	DRIVEWAY RAMPS AND SIDEWALKS	6-07-17				
	HW-949_01	PLANTING DETAILS FOR TREES	7-12-12				
	HW-949_02	PLANTING DETAILS FOR SHRUBS	7-12-12				
	HW-1800_01	GRADING PLAN FOR TYPE B IMPACT ATTENUATION SYSTEM (FLARED)	6-20-11				
	HW-1800_02	GRADING PLAN FOR TYPE B IMPACT ATTENUATION SYSTEM (MEDIAN/GORE)	6-09-11				
	HW-1800_03	TYPE B IMPACT ATTENUATION SYSTEM (TANGENTIAL)	1-05-18				

GENERAL NOTE:

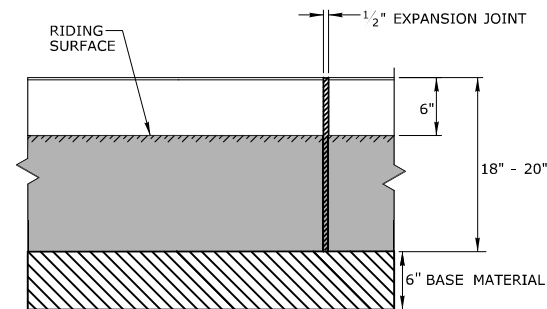
1. PRECAST CONCRETE CURBING MAY BE CAST BY THE MANUFACTURER WITH OPTIONAL LIFTING AND DOWEL BAR HOLES.



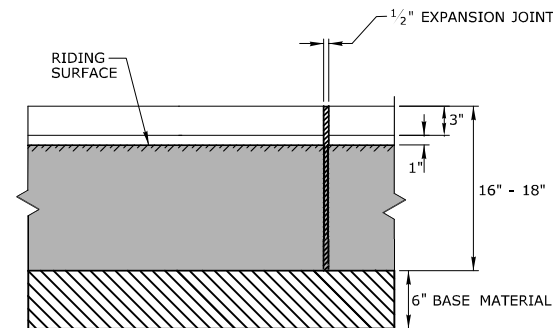
CONCRETE CURBING (6" REVEAL)



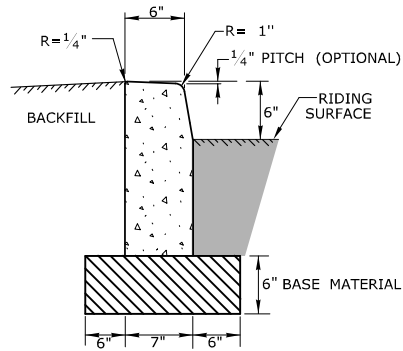
CONCRETE PARK CURBING (4" REVEAL)



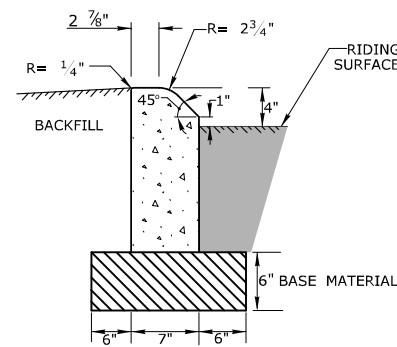
FRONT ELEVATION



FRONT ELEVATION



SECTION




SECTION

REV.	DATE	REVISION DESCRIPTION
1	6/01/10	REVISED TITLE FOR 6" CONC. CURB
2	6/17	REMOVED STONE, BITUMINOUS & GRANITE ITEMS

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/6/2017

NOT TO SCALE

 **STATE OF CONNECTICUT**
DEPARTMENT OF TRANSPORTATION

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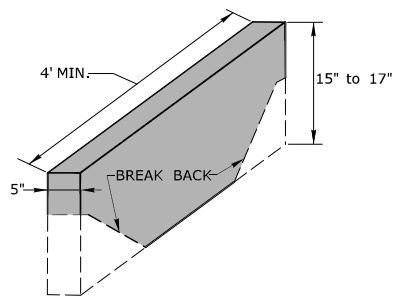
SUBMITTED BY: _____ NAME/DATE/TIME: _____

APPROVED BY: _____ NAME/DATE/TIME: _____

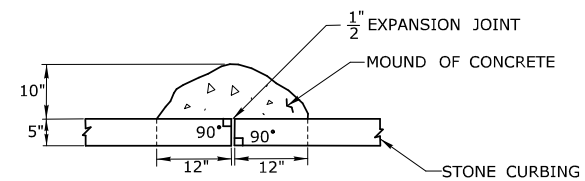
**CTDOT
STANDARD SHEET
OFFICE OF ENGINEERING**

STANDARD SHEET TITLE:
CONCRETE CURBING

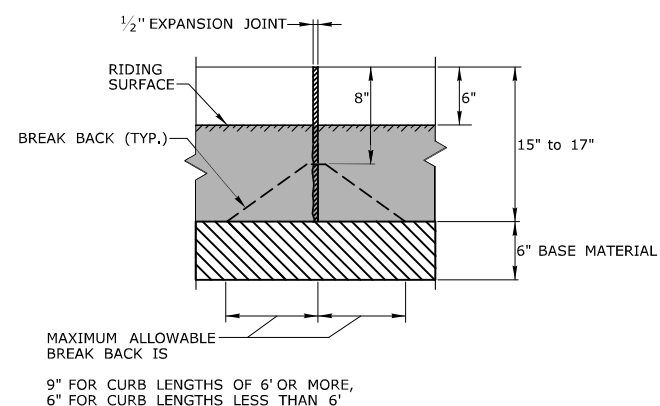
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HW-811_01



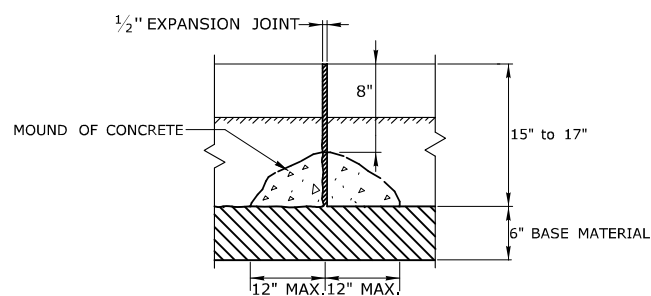
STONE CURBING



PLAN

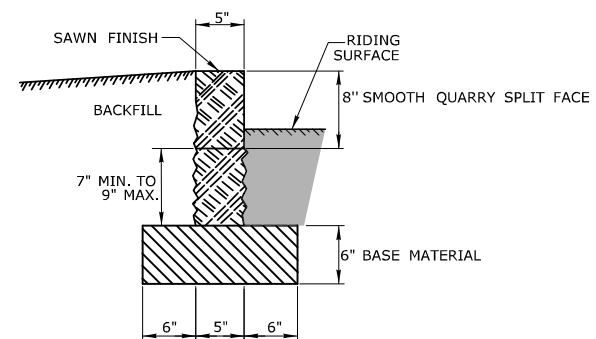


FRONT ELEVATION



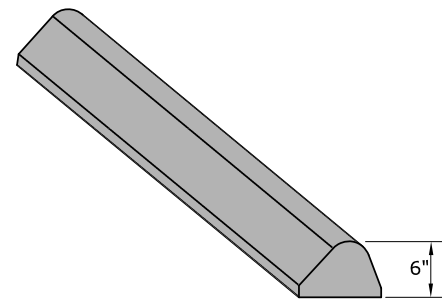
BACK ELEVATION

MOUND OF CONCRETE AT ALL JOINTS FOR STONE CURBING

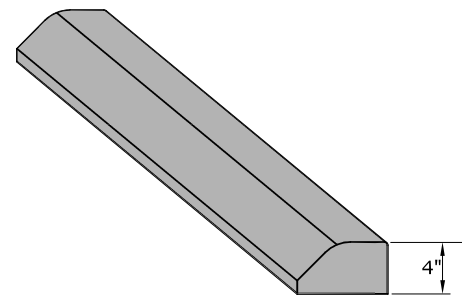


SECTION

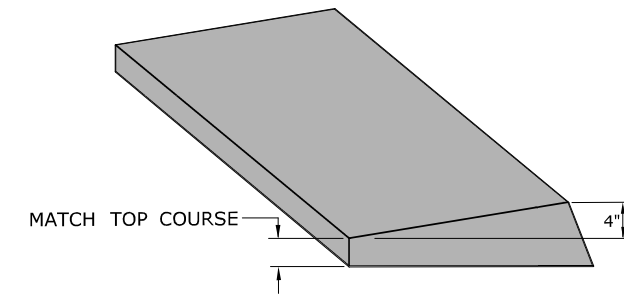
1	6/17	NEW SHEET	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED. Plotted Date: 6/6/2017	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	SUBMITTED BY: _____ NAME/DATE/TIME: _____ APPROVED BY: _____ NAME/DATE/TIME: _____	CTDOT STANDARD SHEET OFFICE OF ENGINEERING	STANDARD SHEET TITLE:	STONE CURBING	STANDARD SHEET NO.:	HW-813_02
REV.	DATE	REVISION DESCRIPTION			NOT TO SCALE		Filename: HW-813_02.dgn Model: CT-Civil.2D-Sheet		STANDARD SHEET TITLE:	



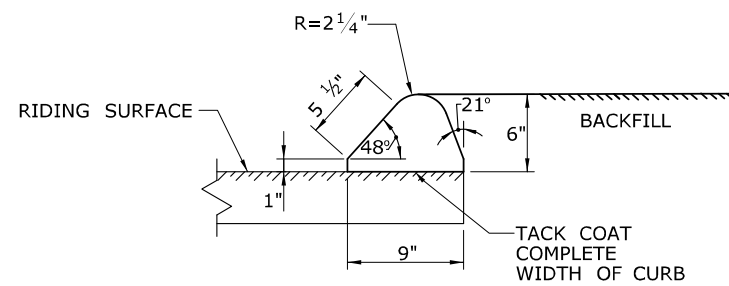
**BITUMINOUS CONCRETE LIP CURBING
(6" HIGH)**



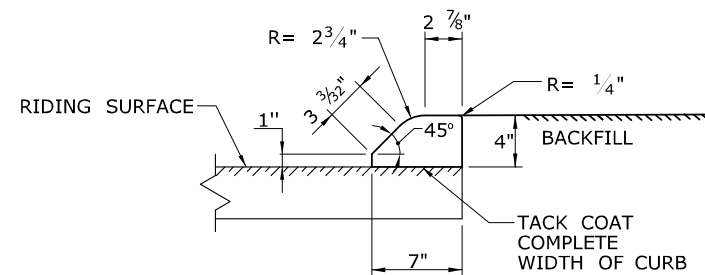
**BITUMINOUS CONCRETE PARK CURBING
(4" HIGH)**



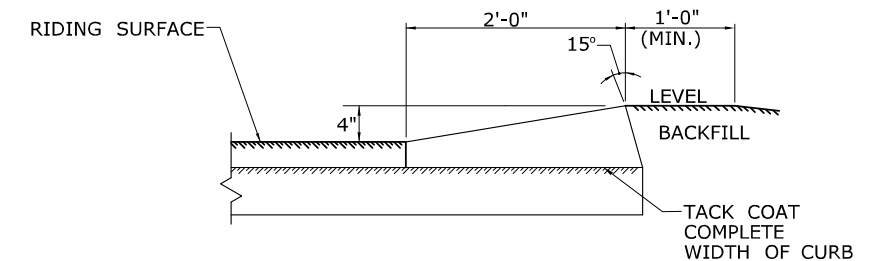
**BITUMINOUS CONCRETE BERM CURBING
(4" HIGH)**



SECTION

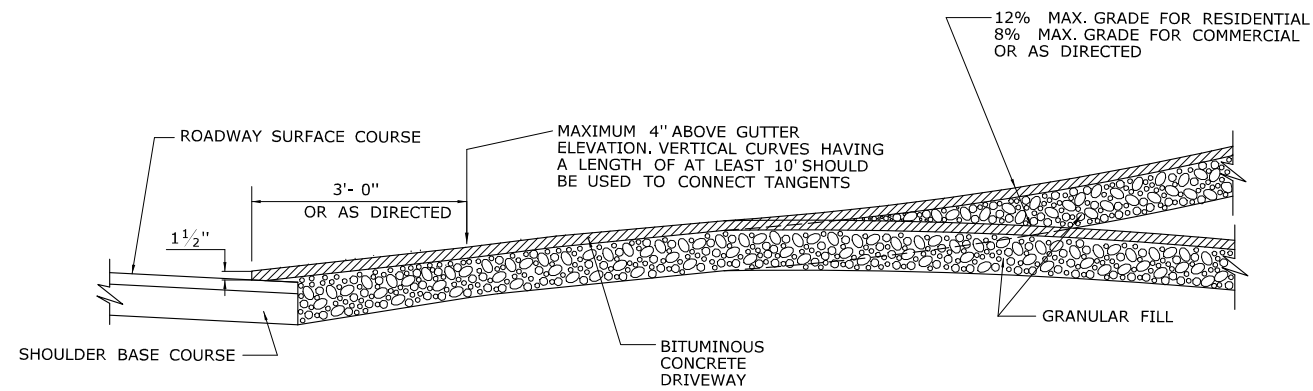


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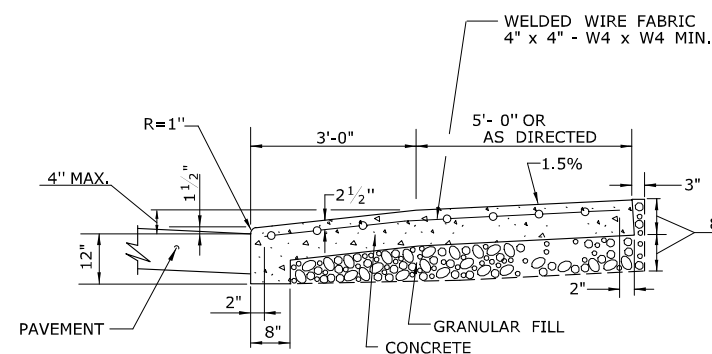


SECTION

1	6/17	NEW SHEET	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	SUBMITTED BY: _____	NAME/DATE/TIME: _____	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: BITUMINOUS CONCRETE CURBING	STANDARD SHEET NO.: HW-815_01
REV.	DATE	REVISION DESCRIPTION			Plotted Date: 6/6/2017	NOT TO SCALE			
			Filename: HW-815_01.dgn	Model: CT-Civil.2D-Sheet					



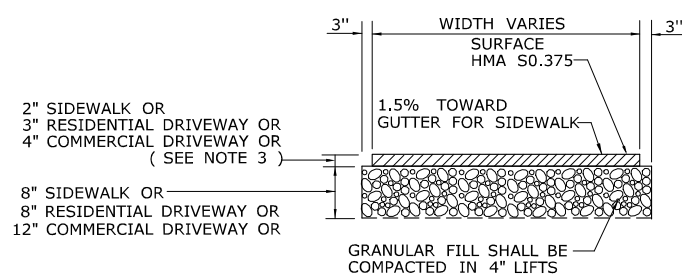
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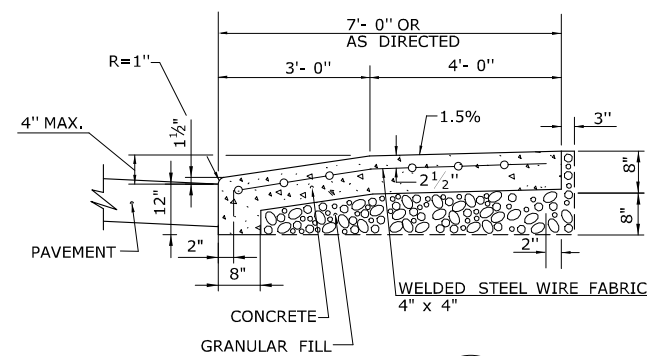
SECTION C

GENERAL NOTES:

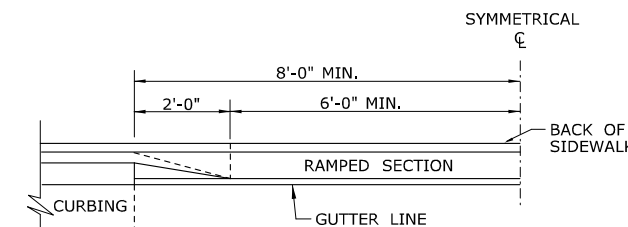
1. DRIVEWAY ENTRANCE SHALL BE A MINIMUM OF 12' WIDE, EXCLUDING CURBING WHEN PRESENT.
2. WELDED WIRE FABRIC MATS WITH REINFORCING AT CLOSER SPACING MAY BE USED.
3. SURFACE HMA S0.375 TO BE PLACED IN TWO EQUAL LIFTS FOR BOTH RESIDENTIAL AND COMMERCIAL DRIVEWAYS.



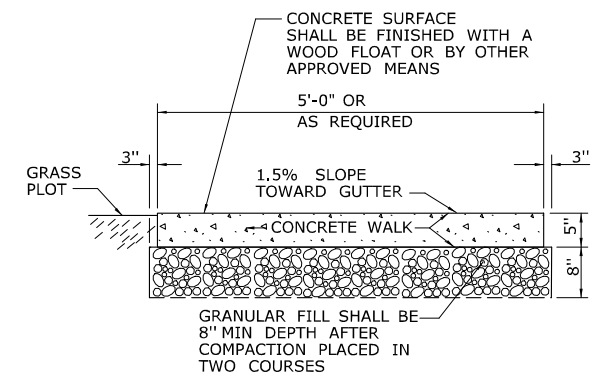
**TYPICAL SECTION
BITUMINOUS CONCRETE
SIDEWALK AND DRIVEWAY**



SECTION B

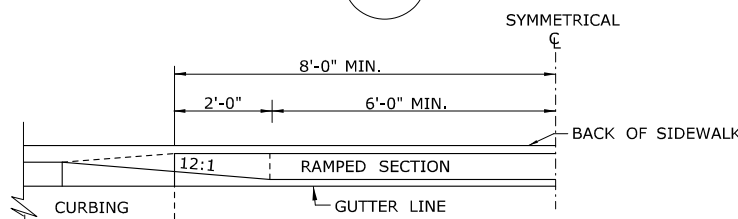


HALF ELEVATION

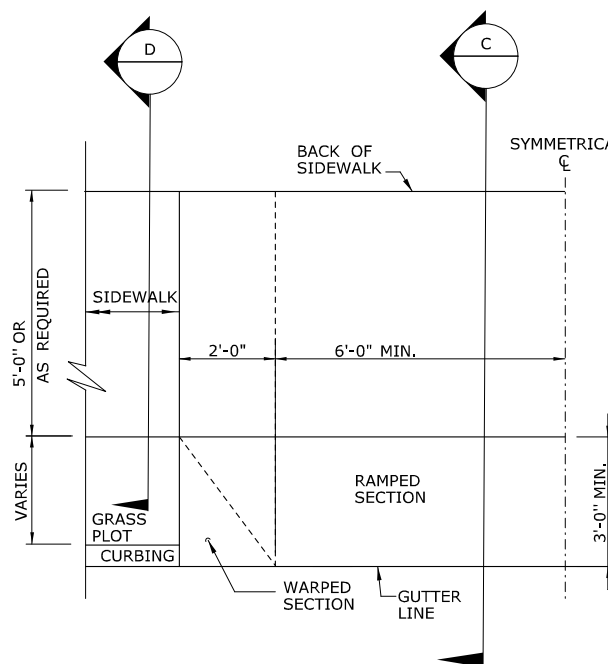


SECTION D

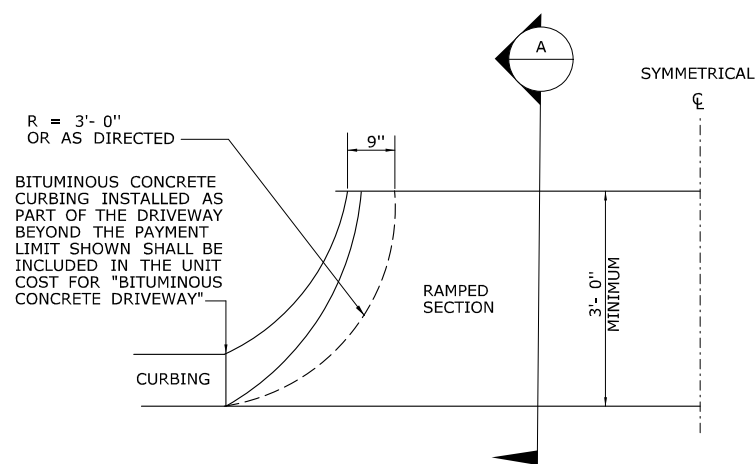
**5' WIDE CONCRETE
SIDEWALK WITH GRASS PLOT**



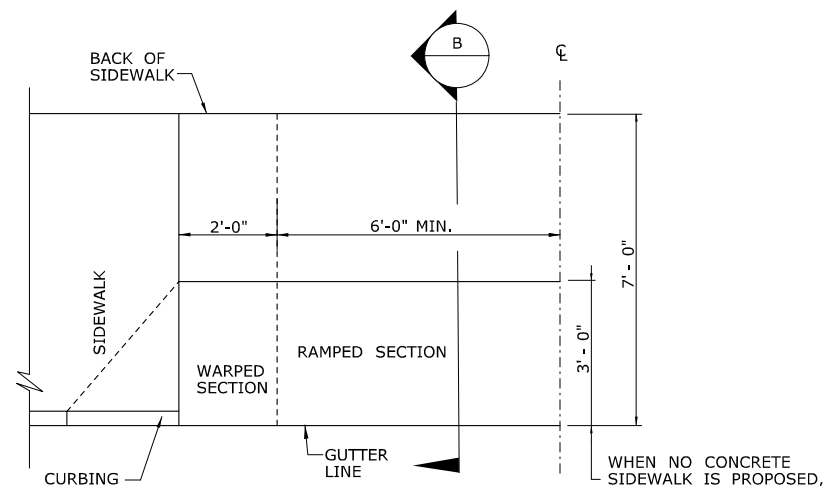
HALF ELEVATION



**HALF PLAN OF
CONCRETE DRIVEWAY RAMP WHERE
CURB IS SEPARATED FROM
SIDEWALK BY GRASS PLOT**



**HALF BITUMINOUS CONCRETE
DRIVEWAY PLAN**



**HALF PLAN OF
CONCRETE DRIVEWAY RAMP WHERE
SIDEWALK ADJOINS CURBING**

REV.	DATE	REVISION DESCRIPTION
1	6/01/10	REVISED BORDER TITLE
2	6/01/10	REVISED HALF ELEVATION DETAILS
3	1/12	REVISE 2% MAX. SLOPE NOTE
4	6/17	REVISED SLOPES & MATERIAL COMPOSITIONS
-	-	INCREASED WALKING WIDTH OF CONCRETE DRIVEWAY RAMP

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/6/2017

NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

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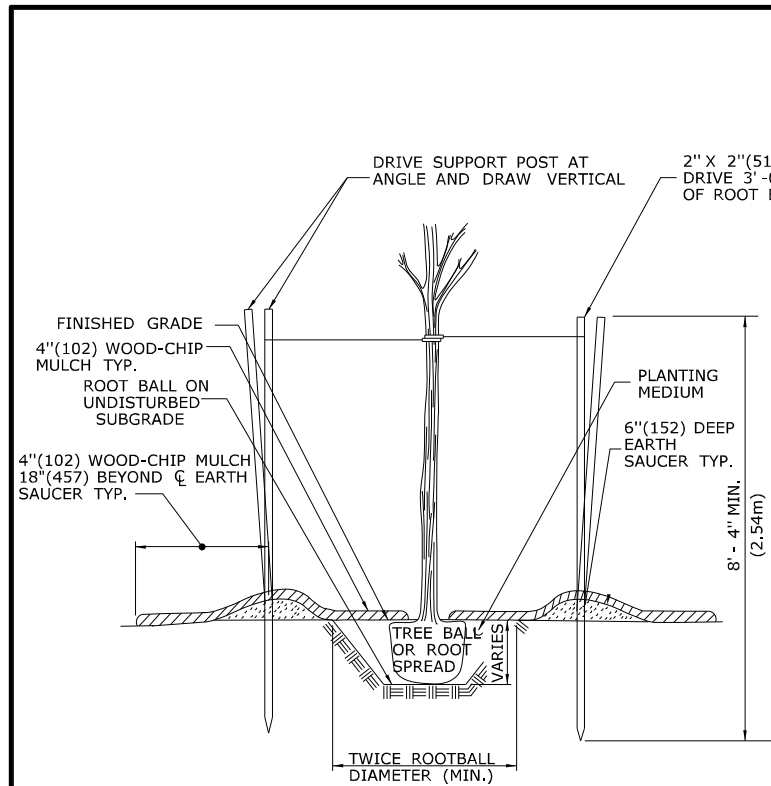
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APPROVED BY: NAME/DATE/TIME:

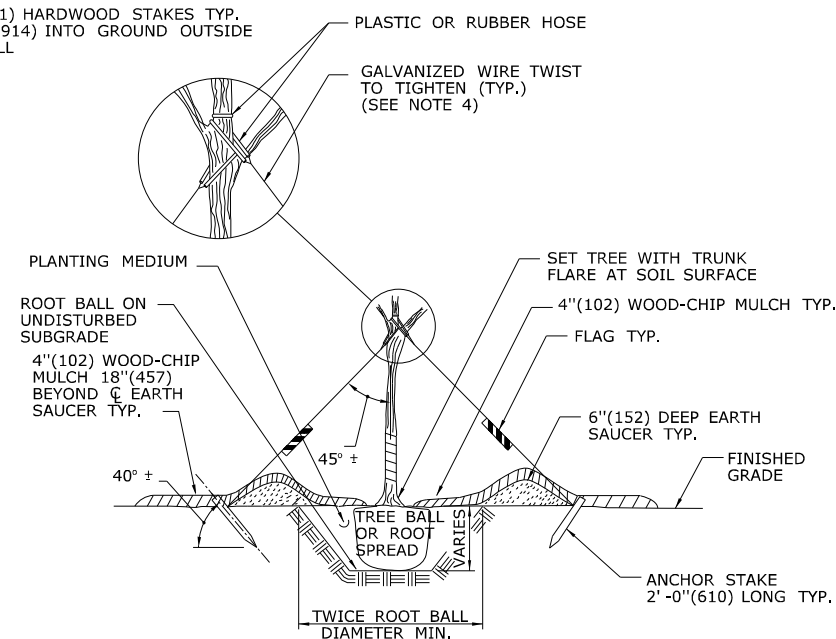
CTDOT
STANDARD SHEET
OFFICE OF ENGINEERING

STANDARD SHEET TITLE:
DRIVEWAY RAMPS AND SIDEWALKS

STANDARD SHEET NO.:
HW-921_01



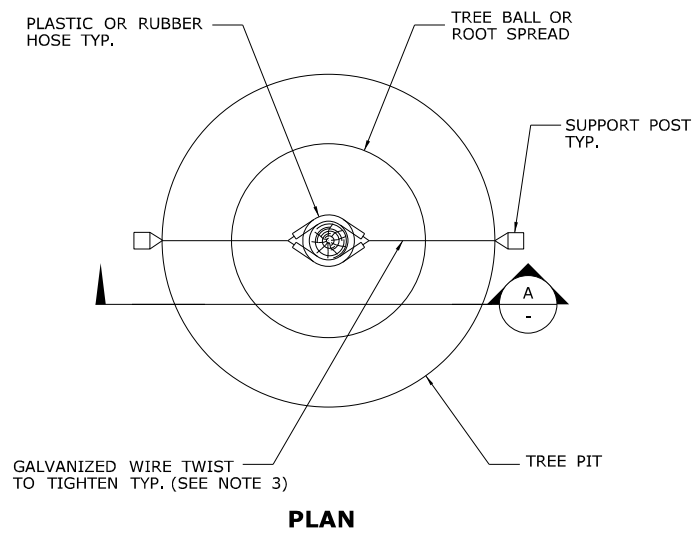
SECTION A



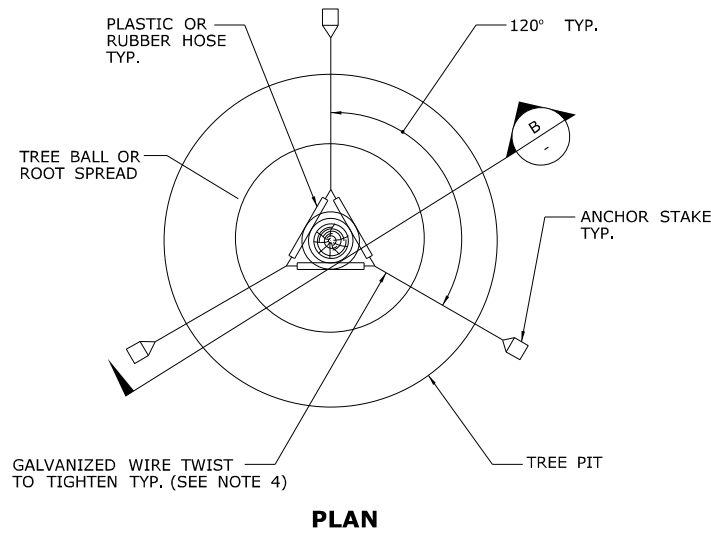
SECTION B

NOTE:
USE 3 POSTS FOR STAKING DECIDUOUS TREES 3"(76) CALIPER OR GREATER AND EVERGREEN TREES 8'(2.4m) HIGH OR GREATER. USE 2 POSTS FOR STAKING DECIDUOUS TREES LESS THAN 3"(76) CALIPER AND EVERGREEN TREES LESS THAN 8'(2.4m) HIGH.

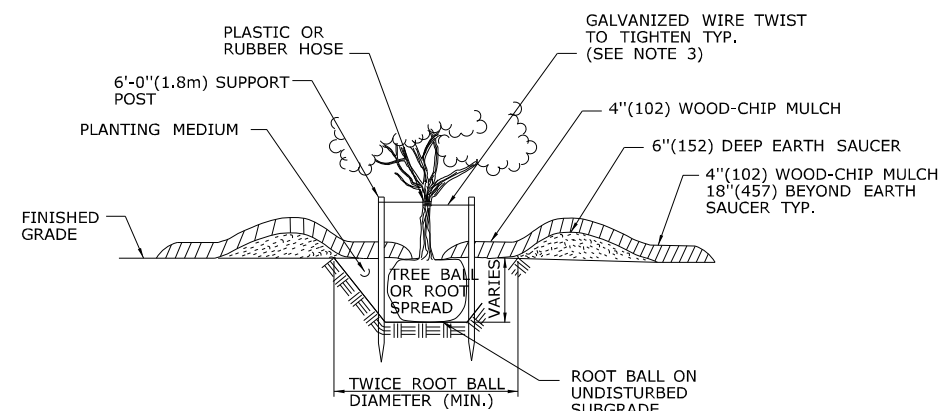
GUYING PLAN



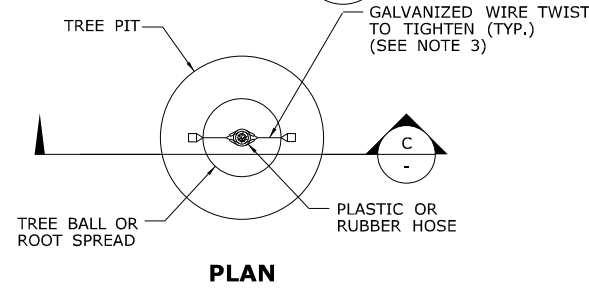
STAKING PLAN



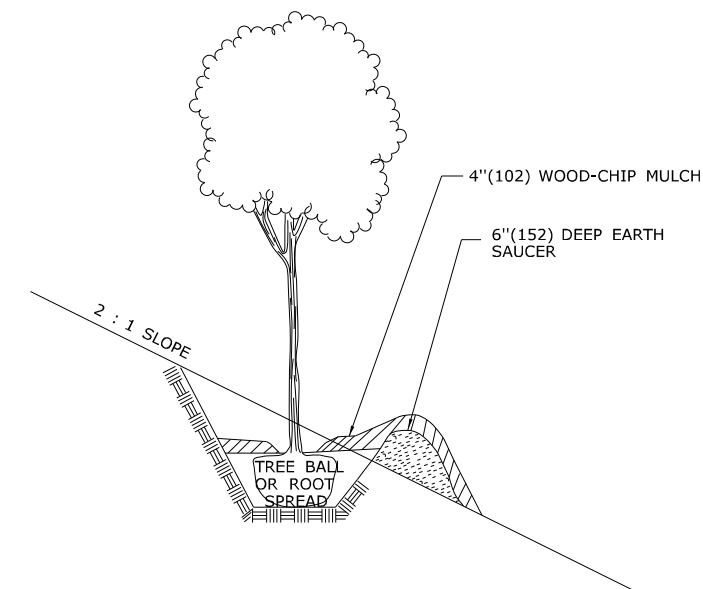
PLAN



SECTION C



STAKING PLAN FOR LOW BRANCHING DECIDUOUS AND EVERGREEN TREES FROM 5'(1.5m) TO 8'(2.4m) HIGH.



GRADING PLAN FOR TREES ON SLOPES

EXAMPLES OF MINIMUM SIZE OF ROOT BALL FOR NURSERY GROWN PLANTS.

CALIPER* INCHES(mm)	BALL DIAMETER INCHES(mm)	PLANTING PIT SIZE INCHES(mm)
-	8(203)	16(406)
-	10(254)	20(508)
1/2(12.5)	12(304)	24(610)
3/4(19)	14(356)	28(711)
1(25)	16(406)	32(813)
1 1/2(38)	20(508)	40(1016)
2(50)	24(610)	48(1219)
2 1/2(65)	28(711)	56(1422)
3(75)	32(813)	64(1626)
3 1/2(90)	38(965)	76(1930)
4(100)	42(1166)	84(2134)
5(125)	54(1372)	108(2743)
6(150)**	-	-

* THE CALIPER OF THE TRUNK IS MEASURED 6"(152) ABOVE THE GROUND UP TO AND INCLUDING 4"(102) SIZES AND 12"(305) ABOVE THE GROUND FOR LARGER SIZES OR AS SPECIFIED IN THE MOST RECENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

** TREES GREATER THAN OR EQUAL TO 6"(152) CALIPER SHALL HAVE A ROOT BALL DIAMETER EQUAL TO 10"(254) PER INCH(25mm) OF TRUNK CALIPER (A 7"(178) CALIPER TREE SHOULD HAVE A ROOT BALL DIAMETER EQUAL TO 70"(1778)).

GENERAL NOTES:

1. THE PLANTING PIT SIZE SHALL BE TWICE THE DIAMETER OF THE ROOT BALL IN WIDTH AND 2"(51) LESS THAN THE HEIGHT OF THE ROOT BALL.
2. ALL EXTERIOR PACKAGING MATERIAL APPLIED TO PLANTS SHALL BE REMOVED AFTER THE PLANT IS LOCATED IN THE PLANTING PIT, CUT AND REMOVE TWINE, BURLAP OR WIRE BASKETS FROM THE TOP 2/3RDS OF THE ROOT BALL.
3. USE DOUBLE STRAND NO. 12 WIRE FOR DECIDUOUS TREES GREATER THAN OR EQUAL TO 3"(76) CALIPER AND USE DOUBLE STRAND NO. 10 WIRE FOR EVERGREEN TREES GREATER THAN OR EQUAL TO 8"(203) CALIPER.
4. TREE TRUNK WRAPPING MATERIAL SHALL BE USED AS DIRECTED BY THE ENGINEER.
5. PLANTING PITS FOR INDIVIDUAL SHRUBS ON SLOPES SHALL BE THREE TIMES THE DIAMETER OF THE ROOT BALL IN WIDTH.

REV.	DATE	REVISION DESCRIPTION

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/23/2011

NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

FILENAME: CTDOT_HIGHWAY_STD_JUNE2011.dgn Model: 71 - HW-949_01

SUBMITTED BY: NAME/DATE/TIME: _____

APPROVED BY: NAME/DATE/TIME: _____

CTDOT
STANDARD SHEET
OFFICE OF ENGINEERING

STANDARD SHEET TITLE:
PLANTING DETAILS FOR TREES

STANDARD SHEET NO.:
HW-949_01

ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

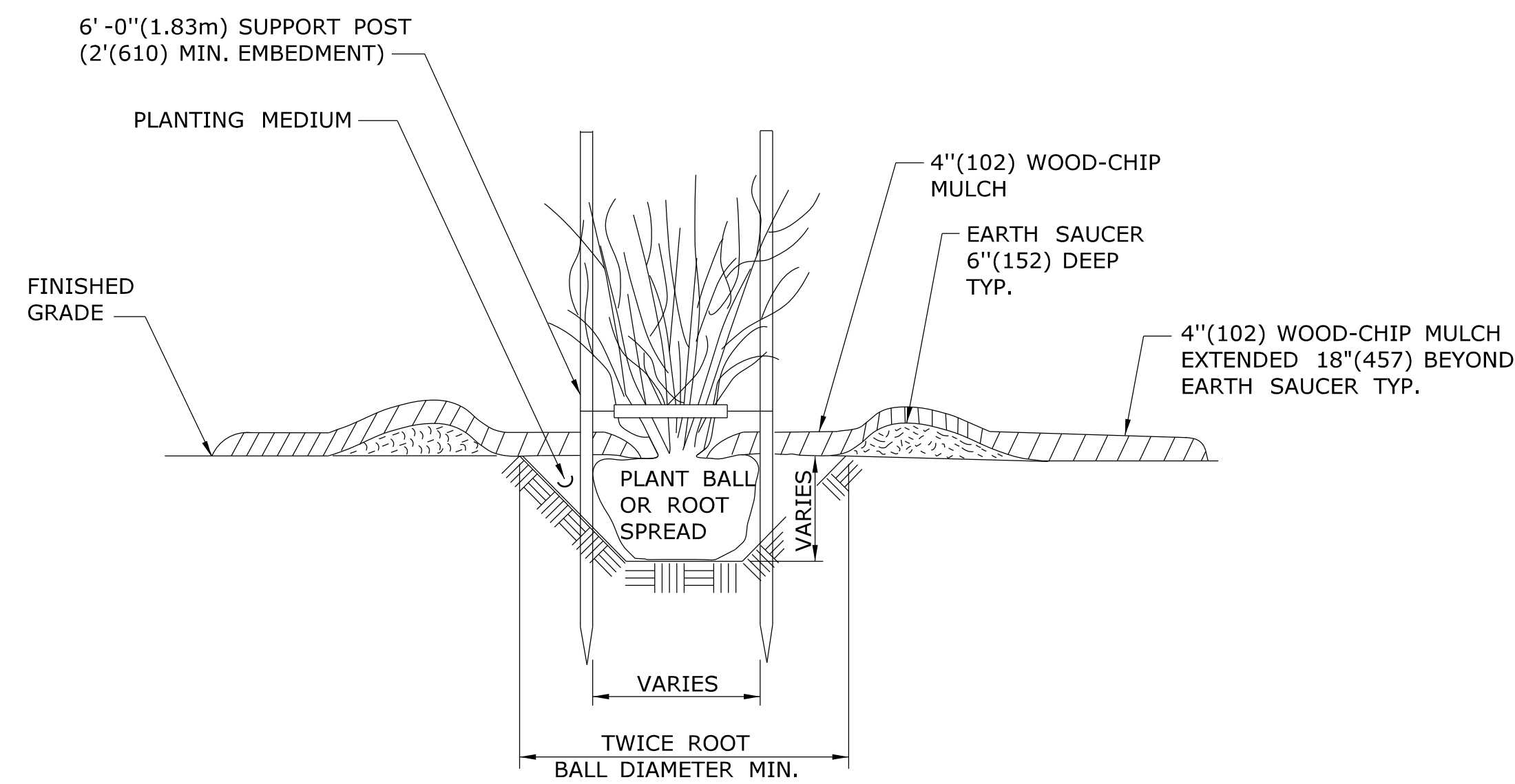
EXAMPLES OF MINIMUM CONTAINER SIZES FOR NURSERY GROWN PLANTS

CALIPER* INCHES(mm)	HEIGHT** FEET(mm)	CONTAINER SIZE GALLONS(LITERS)
-	1(305)	0.7-1.1(2.6-4.2)
-	2(610)	0.7-1.1(2.6-4.2)
-	3(914)	0.7-1.1(2.6-4.2)
-	4(1219)	1.4-2.0(5.3-7.6)
-	5(1524)	3.4-4.2(12.9-15.9)
-	6(1829)	4.7-5.4(17.8-20.4)
1(25)	7(2134)	5.8-7.8(21.9-29.5)
-	8(2438)	9.0-11.5*34.1-43.5)
1½(38)	-	12.0-16.0(45.4-60.6)
2(51)	-	25.0-29.7(94.6-112.4)
2½(64)	-	25.0-29.7(94.6-112.4)

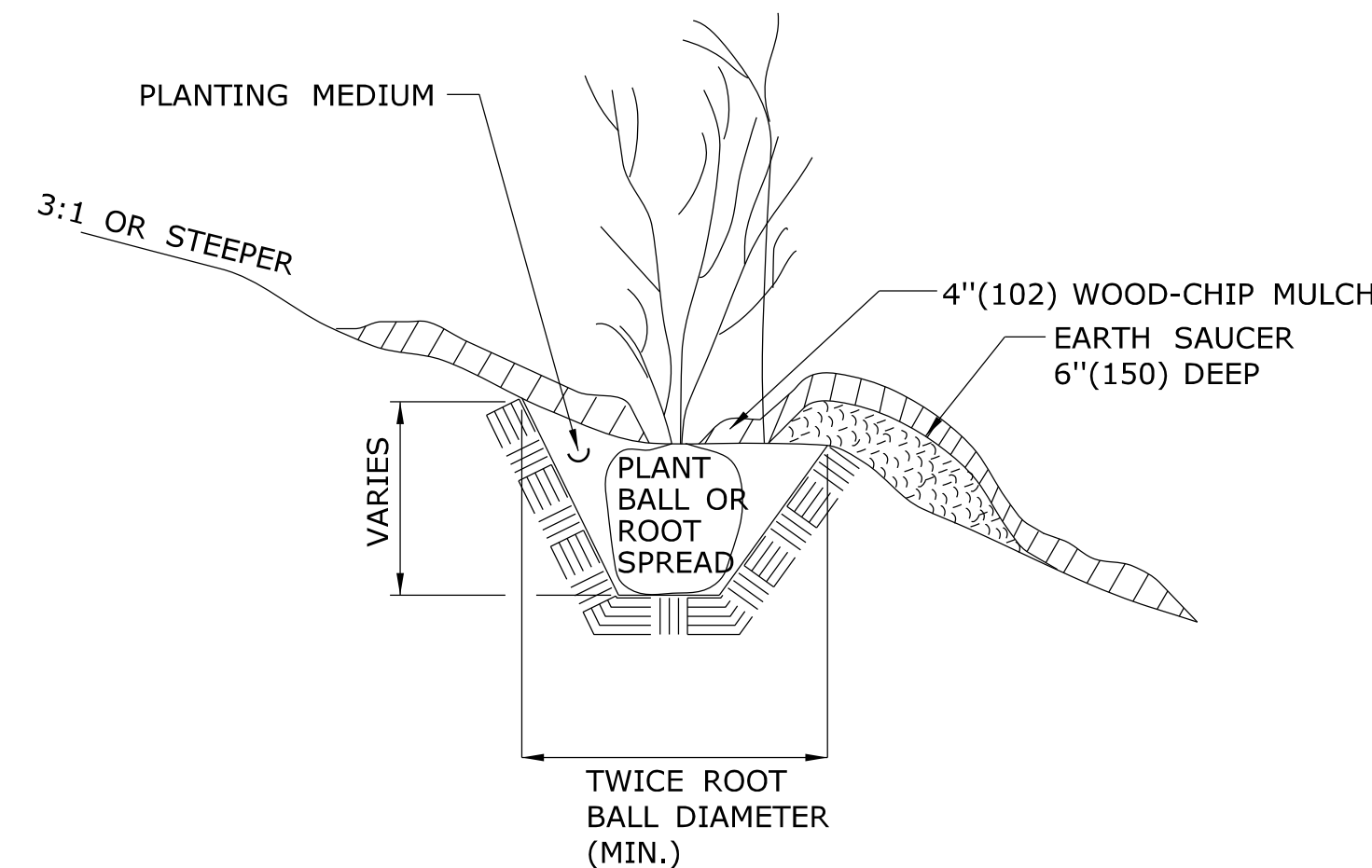
* THE CALIPER IS MEASURED 4"(102) ABOVE GROUND LEVEL.

** ONLY DECIDUOUS SHRUBS ARE INCLUDED IN THIS TABLE. EVERGREEN SHRUBS ARE MEASURED BY HEIGHT BUT, CONTAINER SIZE DEPENDS ON BOTH SIZE AND SHAPE AND ARE GENERALLY 1 TO 2 SIZES LARGER THAN DECIDUOUS PLANTS.

TABLE FOR SHRUBS

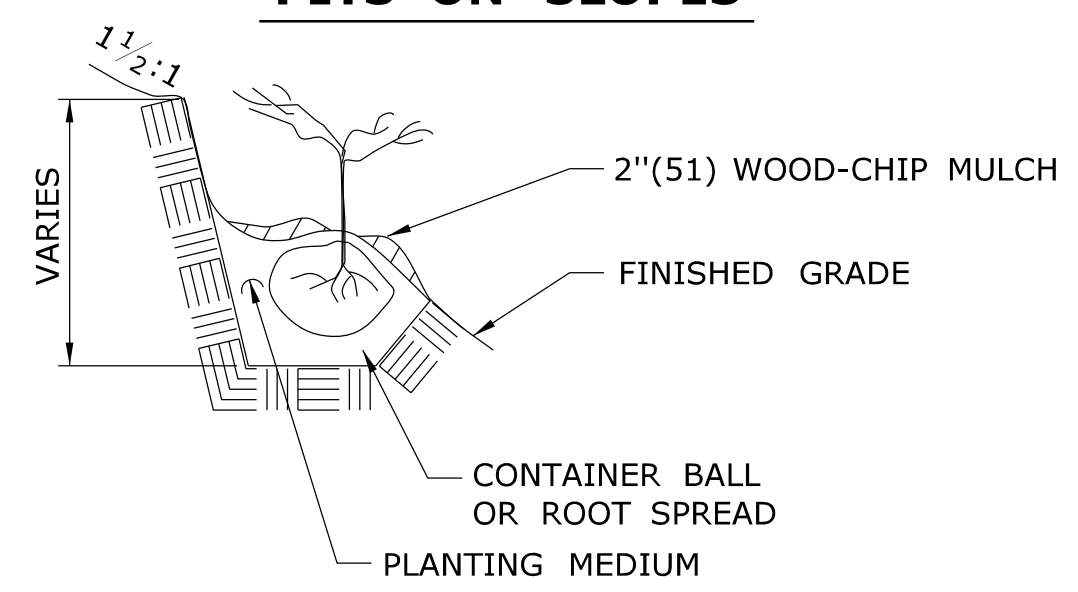


SECTION A



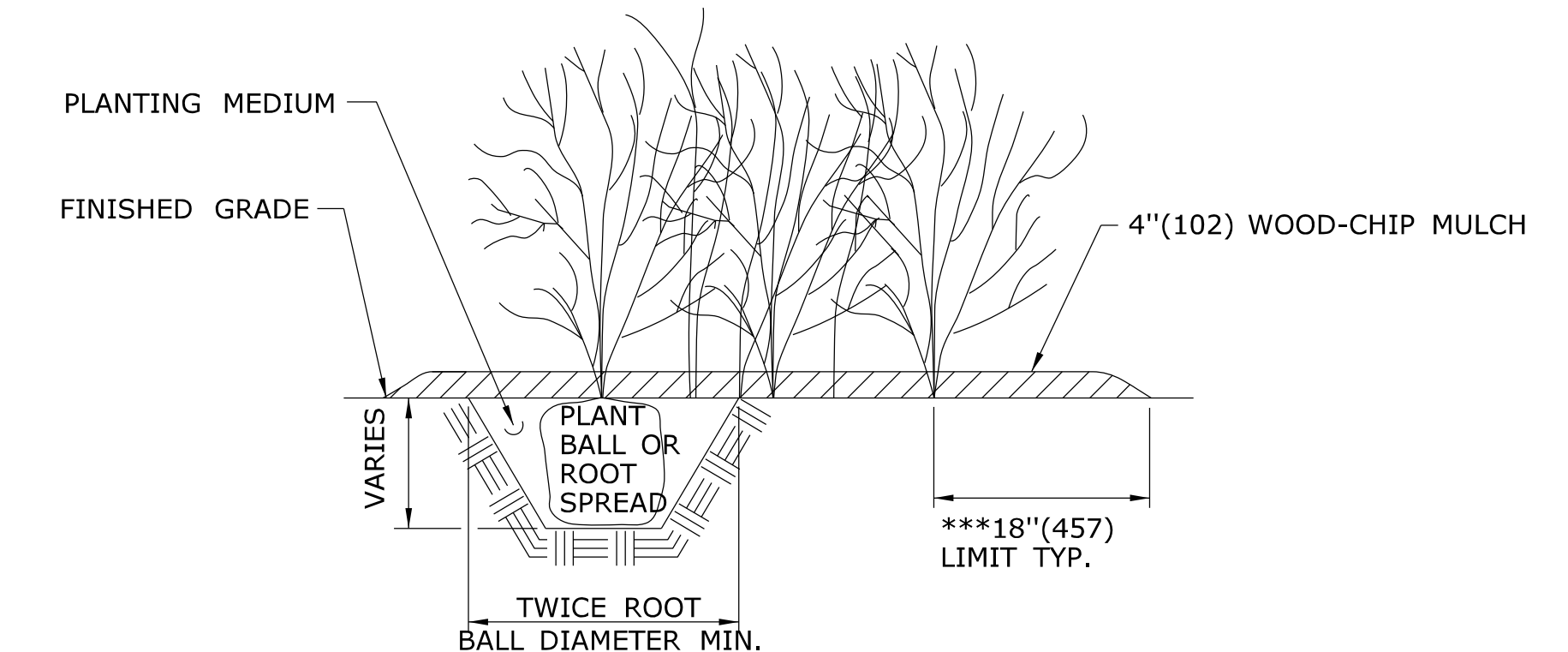
SECTION

PLANTING FOR SHRUBS IN INDIVIDUAL PITS ON SLOPES



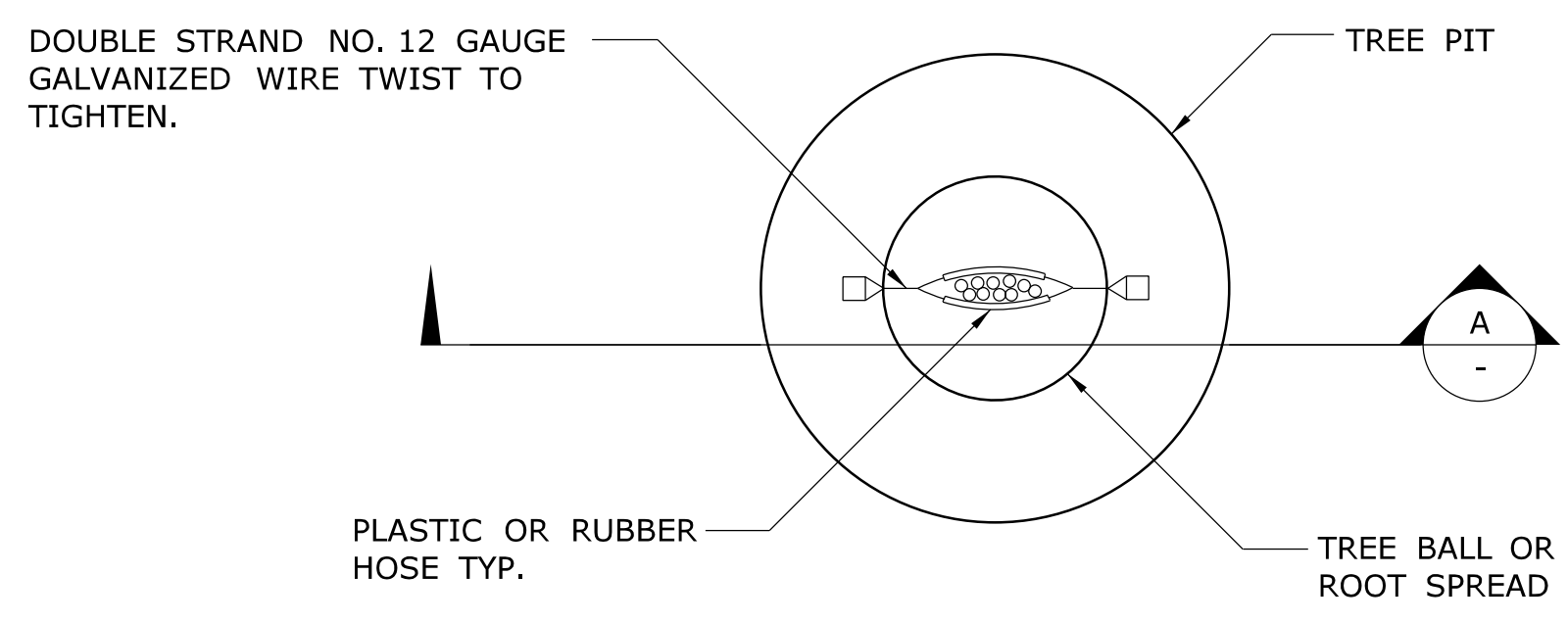
NOTE: PLACE PLANTS AT THE SAME DEPTH THAT THE SEEDLING WAS GROWN IN THE NURSERY.

PLANTING FOR SEEDLINGS, VINES AND GROUND COVER PLANTS IN PITS ON SLOPES



*** UNLESS OTHERWISE DIRECTED, WOOD-CHIP MULCH SHALL BE PLACED TO A LIMIT OF 18"(457) BEYOND THE CENTER OF THE OUTERMOST SHRUBS IN SHRUB BED.

PLANTING FOR SHRUBS IN BEDS



PLAN

STAKING FOR MULTI-STEMMED DECIDUOUS TREES FROM 5'(1.5m) TO 10'(3.0m) HIGH

ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

DOCUMENT ALL LOOP DETECTOR VALUES BOTH CALCULATED AND MEASURED.

DEFINITIONS:

LOOP: #14 AWG WIRE IN SAWCUT, TERMINATED IN HANDHOLE, IMSA SPEC 51-7.
LEAD-IN: 14/2 SHIELDED TWISTED PAIR CABLE FROM HANDHOLE TO CONTROLLER, IMSA SPEC 50-2.
LOOP CIRCUIT: LOOP SAWCUT WIRE SPLICED TO 14/2 LEAD-IN CABLE.
AMPLIFIER: ELECTRONIC DEVICE CONNECTED TO LOOP CIRCUIT. SENSES CHANGE IN RESONANT FREQUENCY AND CREATES AN OUTPUT TO THE CONTROLLER.
MEGOhmmeter: INSTRUMENT SPECIFICALLY DESIGNED TO TEST THE INSULATION RESISTANCE OF A CIRCUIT. COMMON MANUFACTURERS: AMEC®, AMPROBE®, FLUKE®, MEGGER®.

1: RESISTANCE:

1a: INSULATION RESISTANCE: PERFORM A 600 VOLT (MINIMUM) MEGOHMMETER TEST ON LOOP CIRCUIT. THE LOOP AMPLIFIER MUST BE DISCONNECTED FROM THE LOOP CIRCUIT OR THE LOOP AMPLIFIER WILL BE DAMAGED. THE RESISTANCE OF THE LOOP WIRE TO GROUND MUST BE GREATER THAN 100 MEG OHMS.

1b: WIRE RESISTANCE: MEASURE THE DC RESISTANCE OF THE LOOP CIRCUIT. THE LOOP CIRCUIT MUST BE DISCONNECTED FROM THE AMPLIFIER. USING AN OHMMETER CONNECTED ACROSS THE LOOP CIRCUIT, MEASURE THE DC RESISTANCE OF THE CONDUCTORS. THE RESISTANCE SHOULD BE LESS THAN 4 OHMS.

NOTE: ALL TESTS SHALL BE DONE AT THE CONTROLLER ASSEMBLY (CA), HOWEVER IT IS RECOMMENDED TO PERFORM A PRELIMINARY MEGOHMMETER TEST AT THE HANDHOLE PRIOR TO SEALING THE SAWCUT AND SPLICING TO THE LEAD-IN. IF A DEFECTIVE LOOP WIRE IS FOUND, IT MAY BE EASILY REPLACED.

2: LOOP CIRCUIT INDUCTANCE:

2a: CALCULATE INDUCTANCE OF LOOP (L_{LOOP}) AND LEAD-IN CABLE (L_{14/2}).

<u>LOOP INDUCTANCE (ENGLISH)</u>	<u>LOOP INDUCTANCE (METRIC)</u>
$L_{LOOP} = (P/4) (N^2 + N)$	$L_{LOOP} = (3.28P/4) (N^2 + N)$
LEAD-IN INDUCTANCE	LEAD-IN INDUCTANCE
$L_{14/2} = (0.24 \mu h/FT) (D)$	$L_{14/2} = (0.78 \mu h/m) (D)$

WHERE:
 L_{LOOP} = INDUCTANCE OF INDIVIDUAL LOOP SEGMENTS IN MICROHENRIES (μh).
 L_{14/2} = INDUCTANCE OF LEAD-IN CABLE.
 P = PERIMETER OF INDIVIDUAL LOOP SEGMENT, IN FEET OR METERS.
 N = NUMBER OF TURNS.
 D = LENGTH OF LEAD-IN CABLE FROM SPLICE IN HANDHOLE TO CONTROLLER, IN FEET OR METERS.
 $L_T = L_1 + L_2 + L_3$ etc., (TOTAL INDUCTANCE OF SEGMENTED LOOP SPLICED IN SERIES.)
 $L_T = 1 / [(1/L_1) + (1/L_2) + (1/L_3) + \text{etc.}]$, (TOTAL INDUCTANCE OF SEGMENTED LOOP SPLICED IN PARALLEL.)

WHERE:
 L_T = TOTAL INDUCTANCE OF THE SEGMENTED ARRANGEMENT.
 L₁, L₂, L₃ = INDUCTANCE OF INDIVIDUAL LOOP SEGMENTS.

EXAMPLE: (IN ENGLISH)
 6' x 6', 4 TURNS, APPROXIMATELY 300' FROM THE CONTROLLER

$L_{LOOP} = (24/4) (4^2 + 4)$	$L_{14/2} = (0.24 \mu h/FT) (300)$
$L_{LOOP} = (6) (20)$	$L_{14/2} = (0.24) (300)$
$L_{LOOP} = 120 \mu h$	$L_{14/2} = 72 \mu h$

2b: MEASURE INDUCTANCE OF LOOP AND LEAD-IN AT CONTROLLER. USE INSTRUMENT DESIGNED TO MEASURE LOOP CIRCUIT INDUCTANCE.

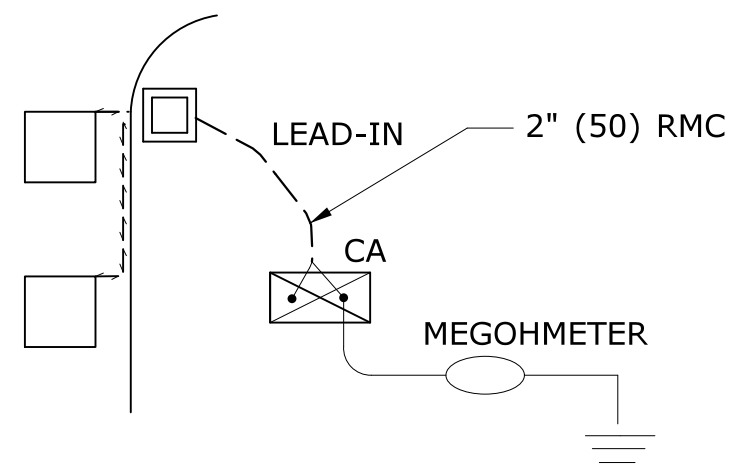
3: POWER INTERRUPTION:

AFTER THE AMPLIFIER HAS TUNED AND IS OPERATING, DISCONNECT POWER BY REMOVING FUSE OR HARNESS CONNECTOR. RETURN POWER TO THE AMPLIFIER AND CONFIRM IT RE-TUNES AUTOMATICALLY WITHOUT ANY MANUAL ADJUSTMENTS.

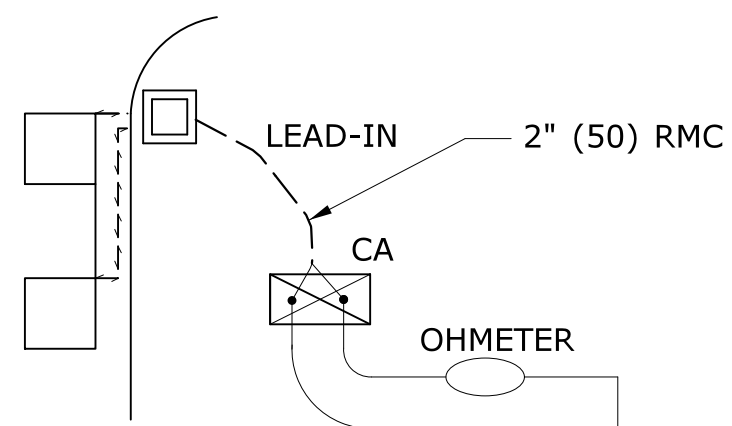
INDUCTIVE LOOP TEST PROCEDURE

PIN	COLOR	FUNCTION
A	WHITE	110 VAC Neutral
B	BROWN	Output Relay Common (moving contact)
C	BLACK	110 VAC (Fused)
D	RED	Loop
E	ORANGE	Loop
F	YELLOW	Output Relay Contact (Closes with moving contact when detecting vehicle)
G	BLUE	Output Relay Contact (Opens with moving contact when detecting vehicle)
H	GREEN	Chassis Ground
J	GREY	110 VAC Delay/Extend Override
Shell		Ground (shall be connected to pin H in the connector)

DETECTOR AMPLIFIER PIN DESIGNATION



TEST 1a



TEST 1b

LOOP NUMBER	RESISTANCE OHMS		INDUCTANCE MICROHENRIES (μh)		AMPLIFIER POWER INTERRUPTION PASS/FAIL (3)
	TO GROUND (1a)	LOOP WIRE (1b)	CALCULATED (2a)	MEASURED (2b)	
D1 FRONT					
D1 REAR					
D2A					
D2B					
D4A FRONT					
D4B REAR					
D5					
D6A					
D6B					

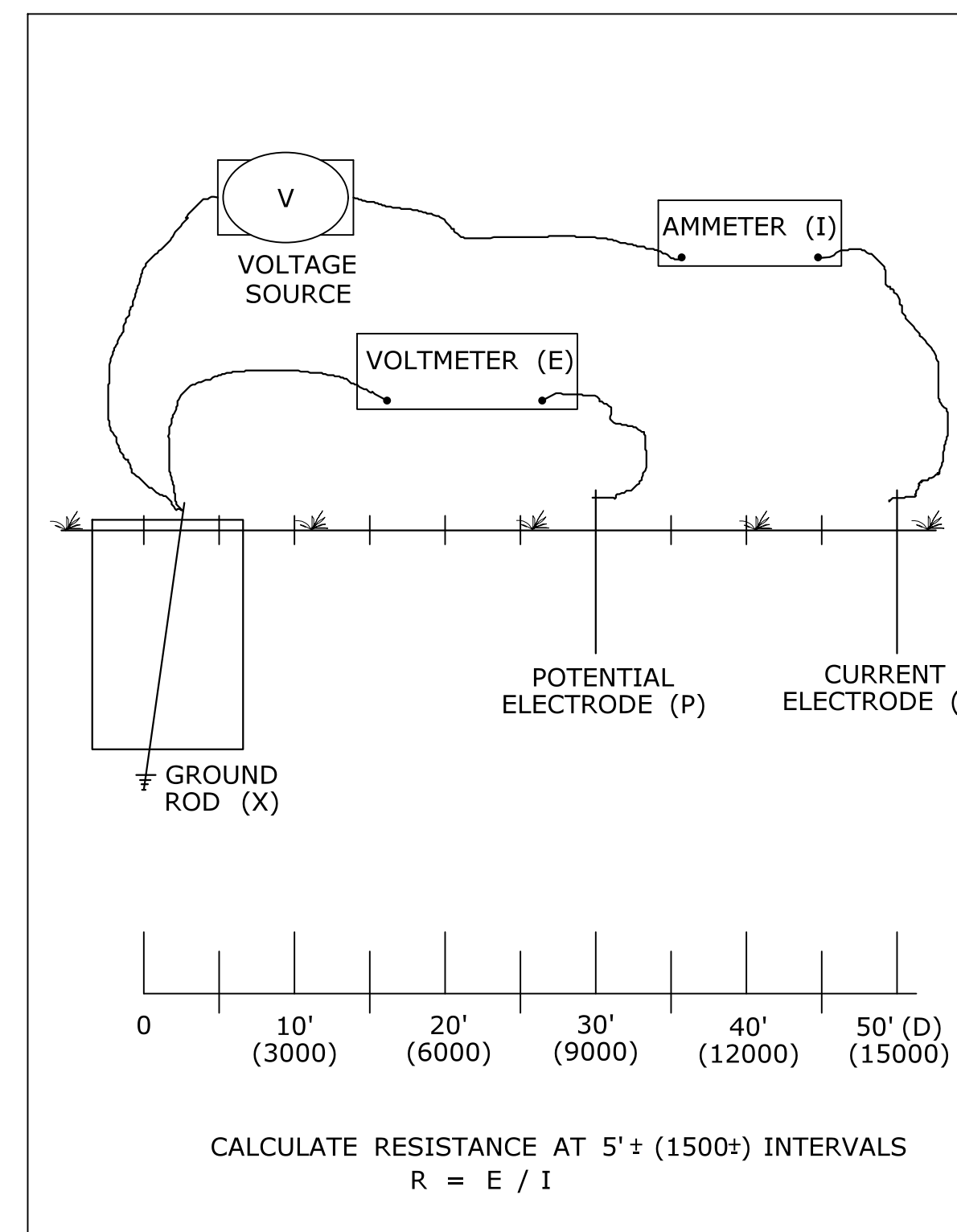
LOOP CIRCUIT TEST DATA (EXAMPLE)

TEST PROCEDURE:

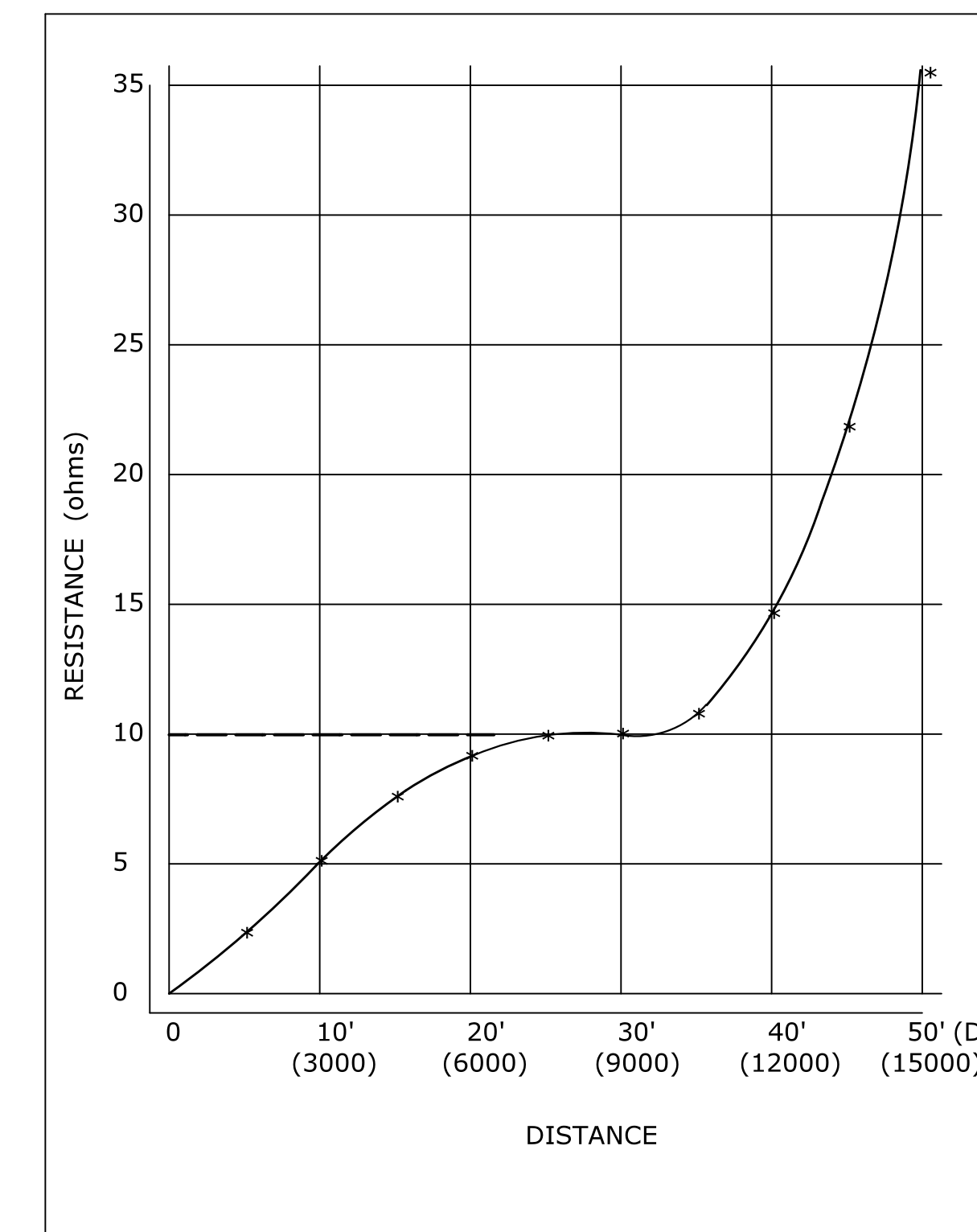
- INSERT ELECTRODE (C) A DISTANCE (D) FROM THE FOUNDATION. RECOMMEND A MINIMUM 50'.
- CONNECT A VOLTAGE SOURCE AND AMMETER BETWEEN THE FOUNDATION GROUND ROD (X) AND C.
- MEASURE THE CURRENT FLOW (I) BETWEEN X AND C.
- INSERT POTENTIAL ELECTRODE (P) AT 5' (1500) INTERVALS IN A STRAIGHT LINE TO ELECTRODE C.
- MEASURE VOLTAGE (E) AT EACH LOCATION OF P.
- CALCULATE RESISTANCE (R) AT EACH LOCATION OF P USING THE FORMULA $R = E/I$.
- PLOT THE VALUES ON A RxD GROUND RESISTANCE CHART.
- THE ACTUAL GROUND RESISTANCE IS WHERE THE PLOTTED CURVE IS RELATIVELY FLAT, USUALLY AT 62%± OF D.
- SEE EXAMPLE CHART: CURVE FLATTENS OUT AT 10 OHMS, APPROXIMATELY 30' (9000) FROM FOUNDATION.
- IF GROUND RESISTANCE IS GREATER THAN 10 OHMS, PERFORM CORRECTIVE ACTION AND RE-TEST.

SUGGESTED CORRECTIVE ACTION:

- A. INSTALL ADDITIONAL 10' (3000) GROUND ROD(S). REFER TO NESC SECTION 09, RULE 94.B.2. DRIVE ADDITIONAL GROUND RODS NO CLOSER TO FOUNDATION THAN 6' (1800). IF MORE THAN ONE IS NEEDED, SPACE MINIMUM 6' (1800) APART. BONDS TO ADDITIONAL GROUND ROD(S) SHALL BE MADE BY A CLAMP DESIGN FOR DIRECT BURIAL OR BY EXOTHERMIC WELDING TECHNIQUE. TOP OF ADDITIONAL GROUND ROD(S) SHALL BE 6" (150) BELOW GRADE.
- B. IN AREAS OF SHALLOW BEDROCK, INSTALL A GROUND GRID OR ARRAY CONSISTING OF BURIED WIRE, RODS, STRIPS OR PLATES. REFER TO NESC SECTION 09, RULE 94.B.3. REFER TO NEC SECTION 250. MINIMUM DEPTH OF 18" (450). GRID CONNECTIONS AND BONDS ON GROUND GRID SHALL BE MADE BY CLAMPS DESIGNED FOR DIRECT BURIAL OR BY EXOTHERMIC WELDING TECHNIQUE.



3 POINT GROUND RESISTANCE TEST CIRCUIT



GROUND RESISTANCE CHART (EXAMPLE)

NOTES:

1. WHEN REQUESTED BY THE ENGINEER, MEASURE RESISTANCE-TO-GROUND OF GROUND ROD AT TRAFFIC CONTROL FOUNDATIONS. SEE FALL-OF-POTENTIAL METHOD. IF LESS THAN 10 ohms, INSTALL SUPPLEMENTAL ELECTRODES AS REQUIRED. NEC ARTICLE 250.
2. DURING THE TEST, THE GROUND ROD SHOULD NOT BE BONDED TO ANY RMC IN THE FOUNDATION.
3. THE VOLTAGE SOURCE, VOLTMETER, AMMETER, ELECTRODES P AND C, AND CONNECTING CABLES ARE AVAILABLE AS A SPECIALIZED TEST INSTRUMENT.
4. REFER TO NATIONAL ELECTRICAL SAFETY CODE (NESC) SECTION 09, GROUNDING METHODS FOR ELECTRIC SUPPLY AND COMMUNICATIONS FACILITIES.
5. REFER TO NATIONAL ELECTRICAL CODE (NEC) CHAPTER 2, ARTICLE 250, GROUNDING.

3 POINT FALL-OF-POTENTIAL GROUND RESISTANCE TEST

LEGEND AS SHOWN ON TRAFFIC CONTROL SIGNAL PLAN:

[Symbol]	INDUCTIVE LOOP DETECTOR
[Symbol]	SAW CUT
[Symbol]	RIGID METAL CONDUIT
[Symbol]	HANDHOLE

REV.	DATE	REVISION DESCRIPTION
2	1-2014	REVISED GROUND RESISTANCE NOTES.
1	4-2012	MINOR REVISIONS.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 1/7/2014

DIMENSIONS ARE IN ENGLISH (") & METRIC UNITS (mm). METRIC DIMENSIONS ARE ROUNDED: - OVER 1" TO NEAREST 5 mm. - UNDER 1" TO NEAREST 1 mm.

NOT TO SCALE

STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION

File name: CTDOT-TRAFFIC-STD.DGN Model: TR-1000_01

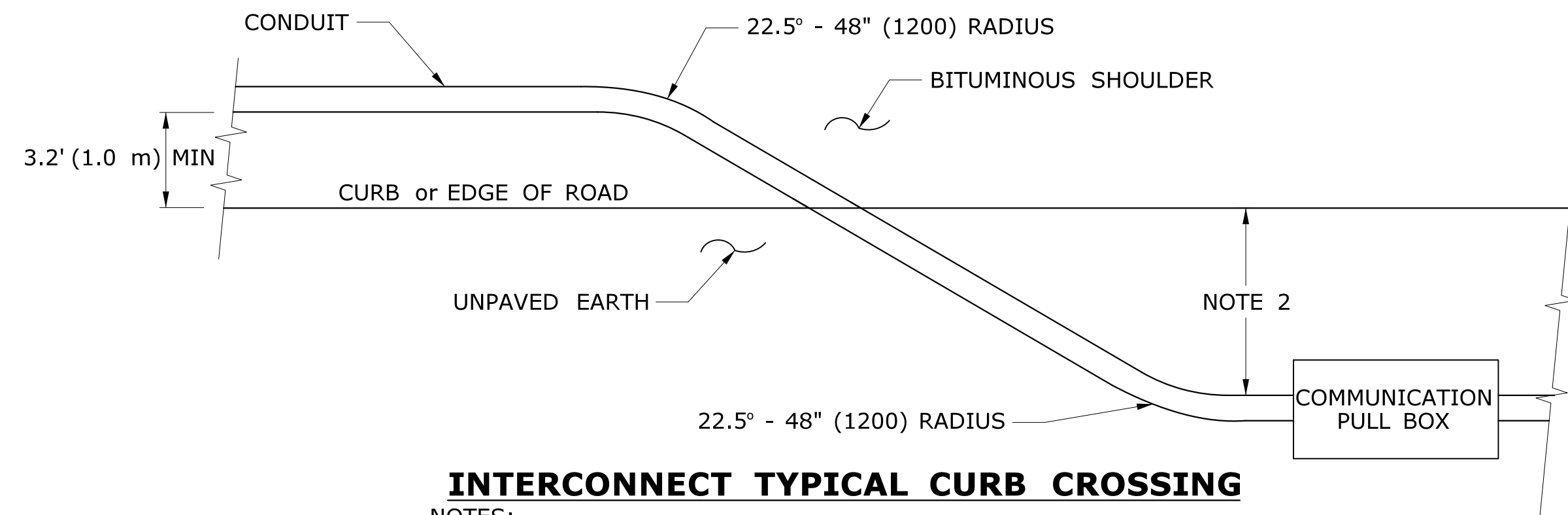
SUBMITTED BY: NAME/DATE/TIME:

APPROVED BY: NAME/DATE/TIME:

CTDOT STANDARD SHEET
 OFFICE OF ENGINEERING

STANDARD SHEET TITLE:
GENERAL CLAUSES (TEST PROCEDURES)

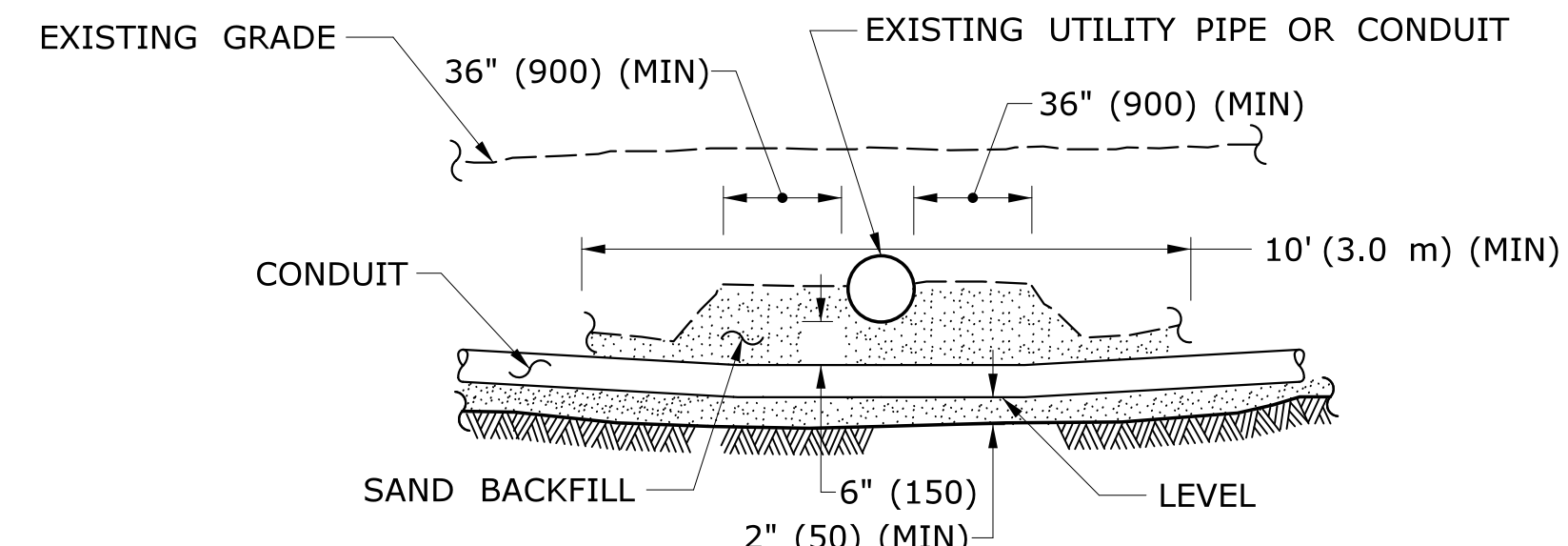
STANDARD SHEET NO.:
TR-1000_01



INTERCONNECT TYPICAL CURB CROSSING

NOTES:

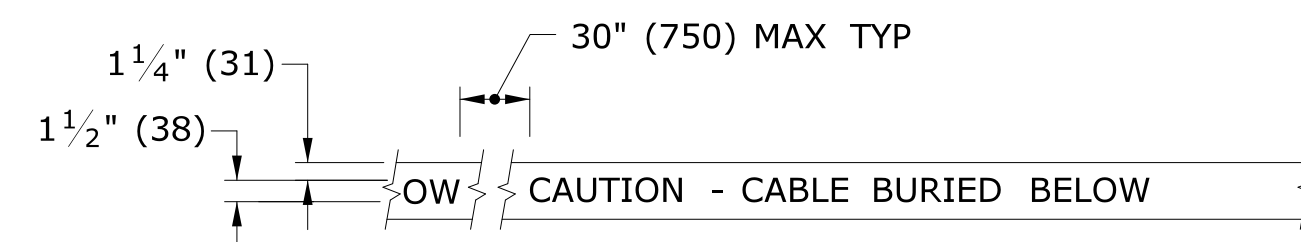
1. RESTORE AREAS DISTURBED BY TRENCH TO ORIGINAL CONDITION.
2. INSTALL PULL BOX A MINIMUM OF 10' (3.0 m) FROM CURB UNLESS OTHERWISE SHOWN ON PLANS OR DIRECTED BY ENGINEER.



CROSSING UNDER EXISTING UTILITY

NOTES:

1. WHEN ENCOUNTERED AT APPROXIMATELY THE SAME DEPTH, CROSS BENEATH.
2. PROTECT & SUPPORT EXPOSED EXISTING UTILITY.

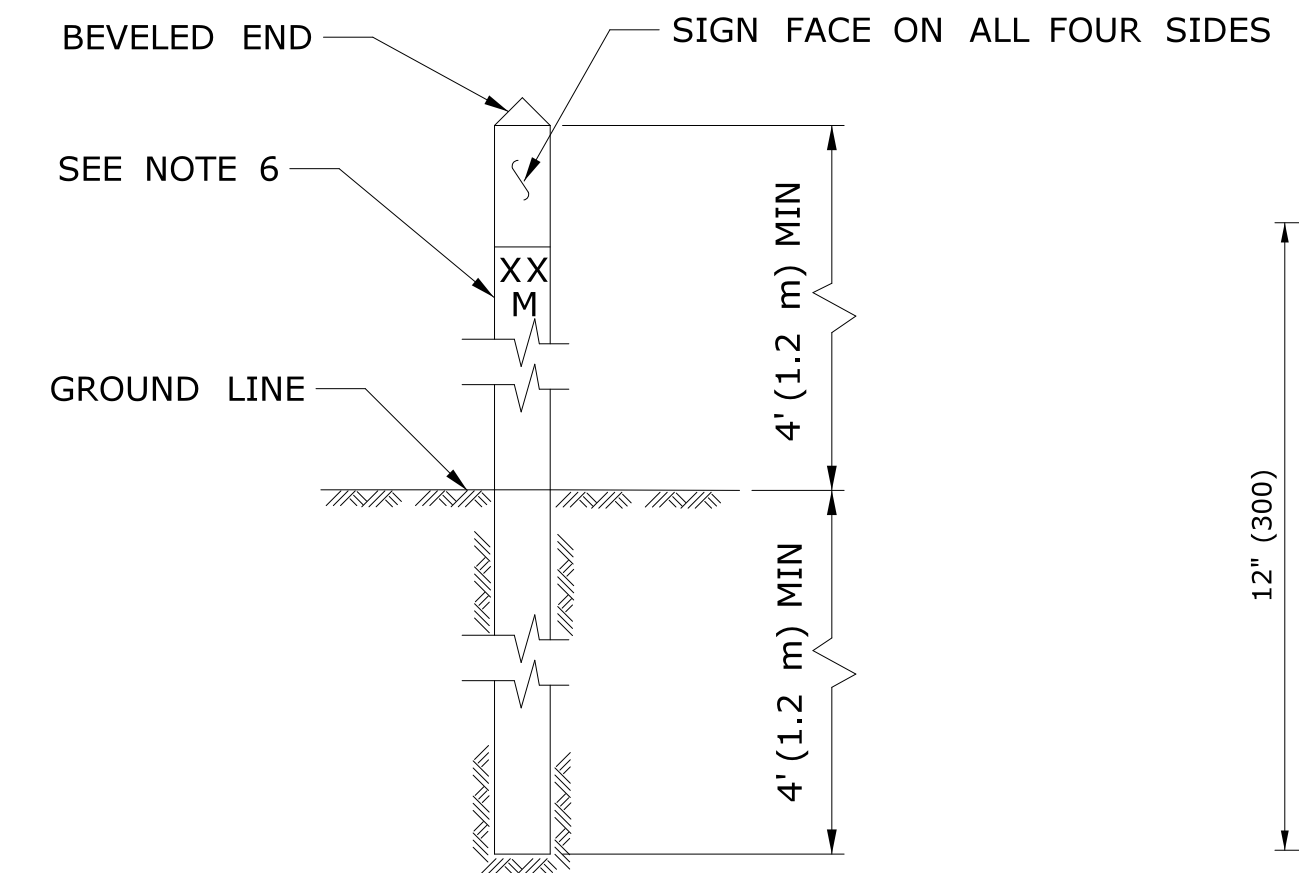


DETECTABLE WARNING TAPE

NOTE:

STANDARD SPECIFICATIONS, ARTICLE: 1.05.15

1. TAPE COLORS:
COMMUNICATION - ORANGE BACKGROUND / BLACK LEGEND
POWER - RED BACKGROUND / BLACK LEGEND



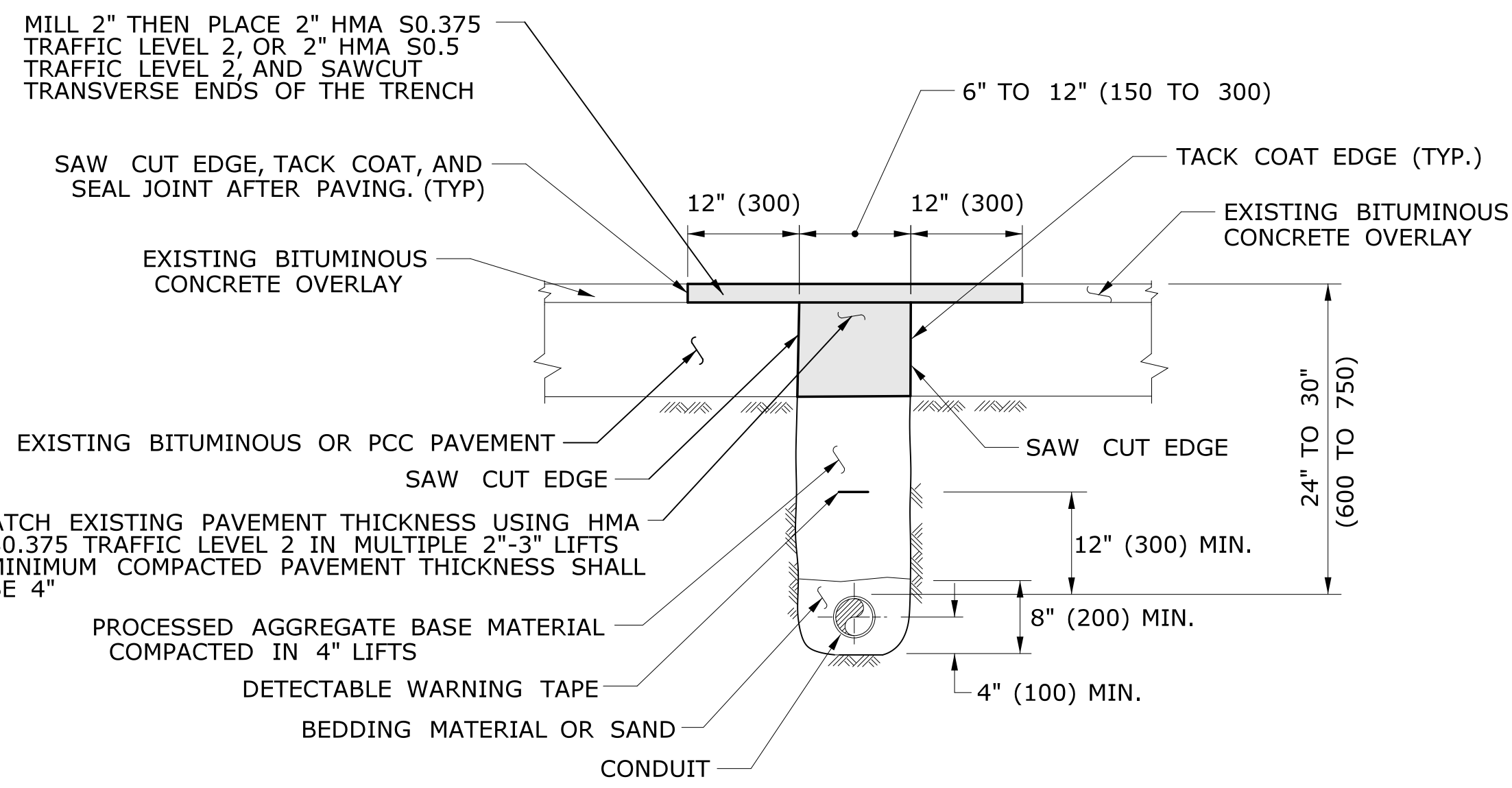
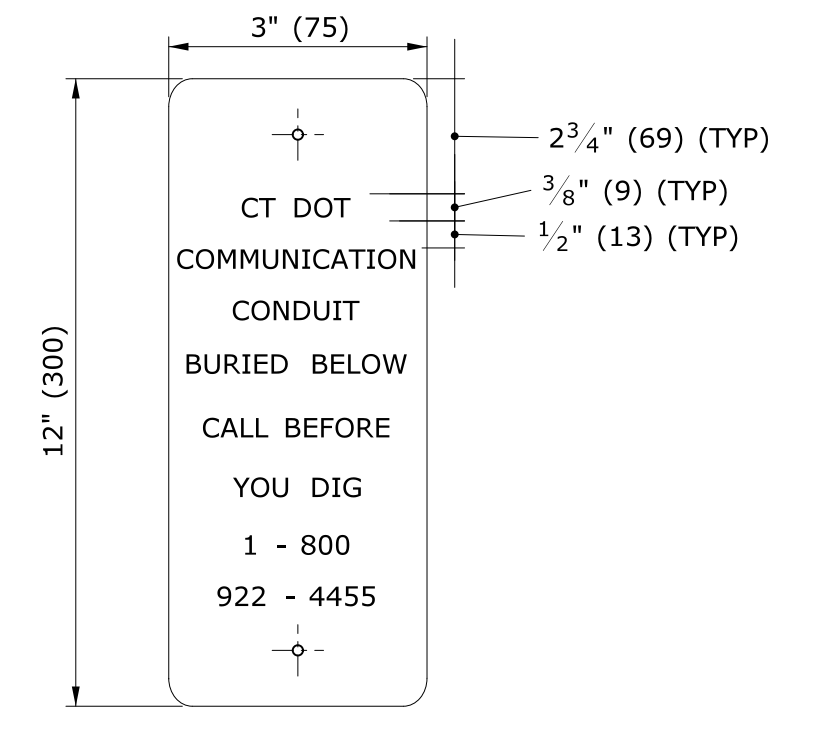
INTERCONNECT CONDUIT IDENTIFICATION POST

NOTES:

1. 4" x 4" (100 x 100) NOMINAL, PRESSURE TREATED WOOD POST.
2. ATTACH SIGN TO POST WITH 1/4" x 1 1/4" (6 x 31) STAINLESS STEEL LAG SCREW WITH NYLON WASHER ON FACE OF SIGN.
3. SIGN COLORS: BACKGROUND - ORANGE (RETROREFLECTIVE)
LEGEND - BLACK (OPAQUE).
4. INSTALL POST APPROX 24" (600) FROM RMC IN VICINITY OF EACH PULL BOX.
5. INSTALL POSTS BETWEEN PULL BOXES, APPROX 10' (3.0 m) OFF CURB.
SPACE POSTS 1500± (460 m±) APART.
6. PERMANENTLY ATTACH STAINLESS STEEL NUMBERS INDICATING DISTANCE TO TRENCH IN FEET (METERS) CONTAINING COMMUNICATION CABLE. ATTACH NUMBERS TO SIDE OF POST FACING CONDUIT. INCLUDE "M" SUFFIX IF METERS.

SIGN FACE DETAIL

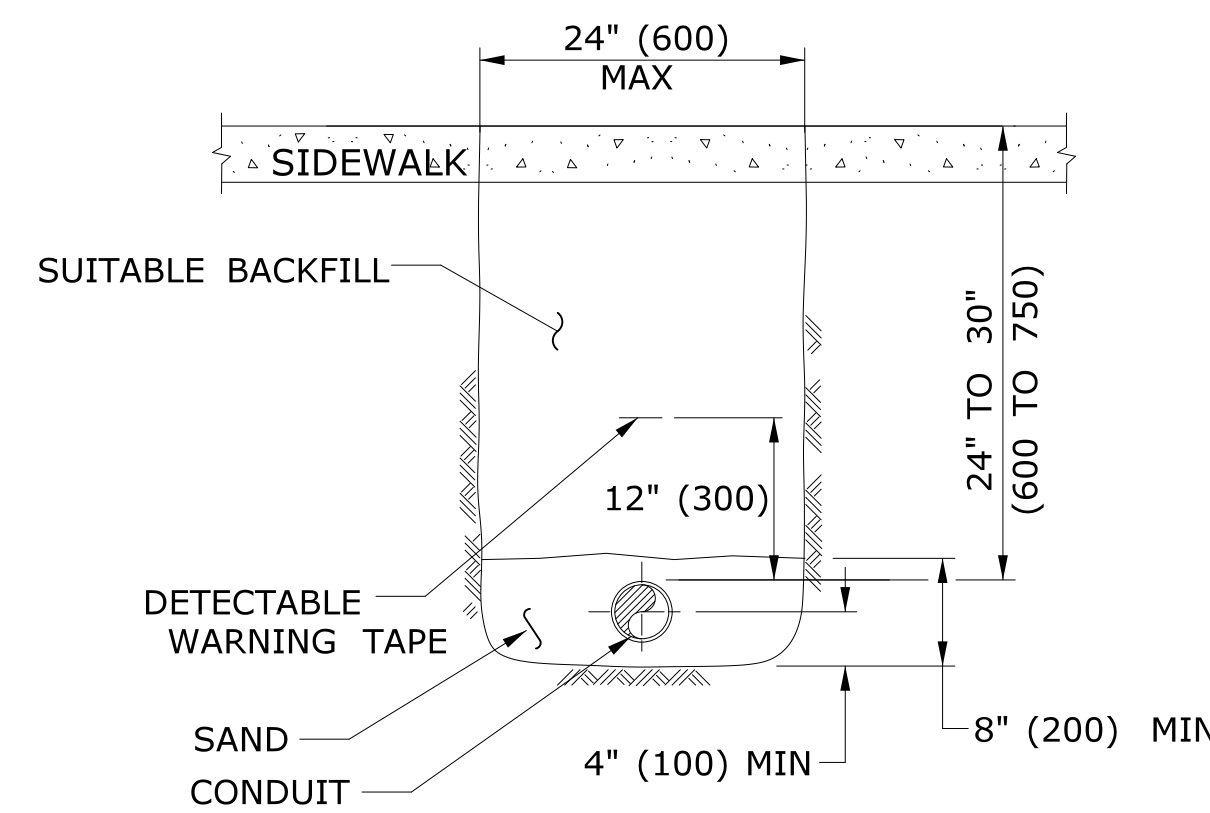
SIGN # 41-4669



PAVEMENT - BITUMINOUS CONCRETE OR OVERLAYED PORTLAND CEMENT CONCRETE

NOTES:

- STANDARD SPECIFICATION, ARTICLE 3.04 AND SPECIAL PROVISION, SECTION 4.06.03
1. TOTAL HOT MIX ASPHALT (HMA) THICKNESS TO MATCH EXISTING BITUMINOUS CONCRETE AND PORTLAND CEMENT CONCRETE (PCC) THICKNESS.
 2. WHEN ALLOWED BY ENGINEER, USE CONTROLLED LOW STRENGTH MATERIAL (CLSM) AS BEDDING MATERIAL. TOP OF CLSM AT LEAST 20" (500) BELOW SURFACE.

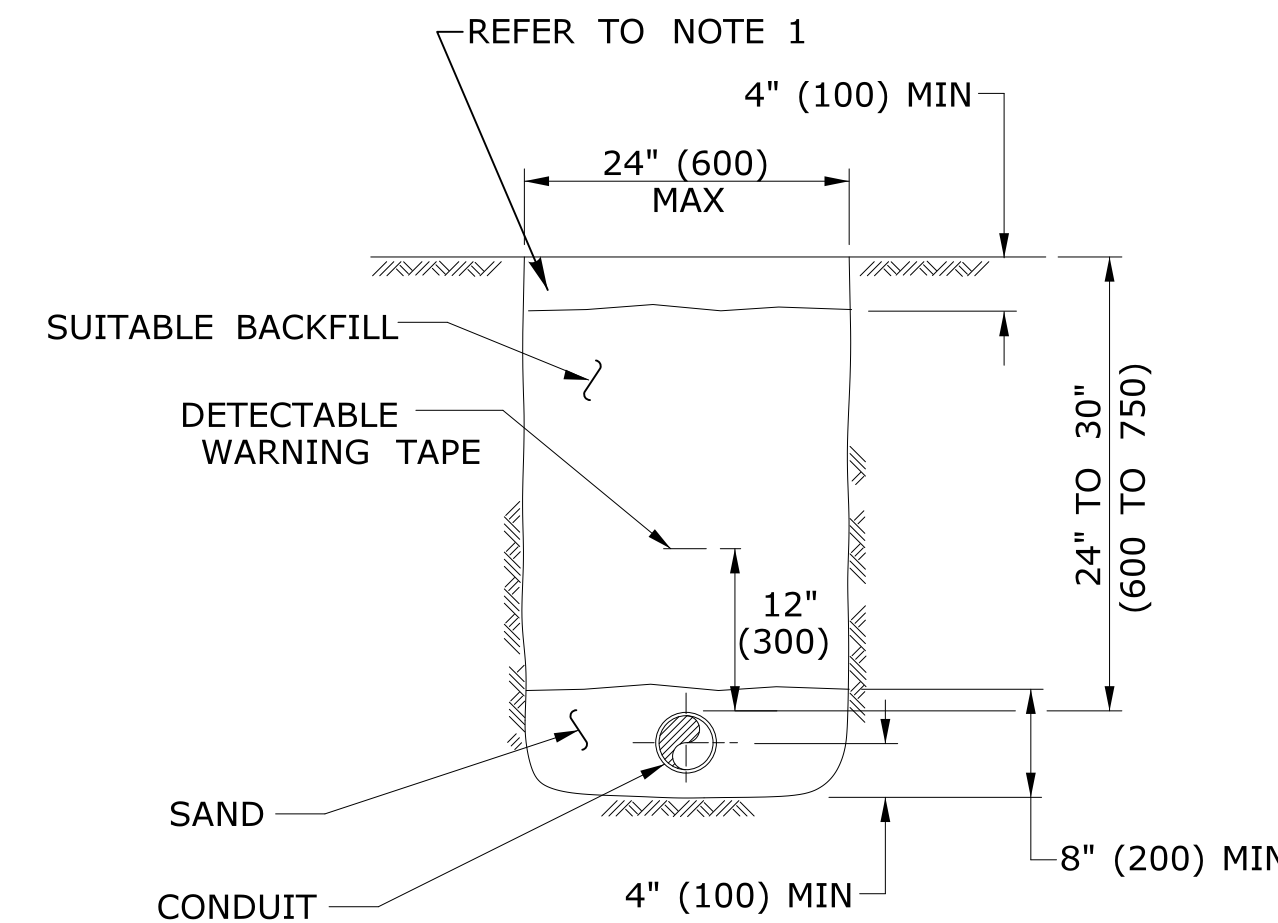


SIDEWALK

NOTES:

STANDARD SPECIFICATIONS, ARTICLE: 9.21 & 9.22

1. WHERE CONCRETE SIDEWALK DAMAGED OR CUT, REPLACE THE ENTIRE SECTION BETWEEN JOINTS. REPLACEMENT SIDEWALK IS PAID FOR AT THE CONTRACT UNIT PRICE FOR "CONCRETE SIDEWALK".



EARTH

NOTES:

STANDARD SPECIFICATIONS, ARTICLE: 9.50

1. IN MOWED AREAS: PLACE TOPSOIL, FERTILIZER, SEED, & MULCH.

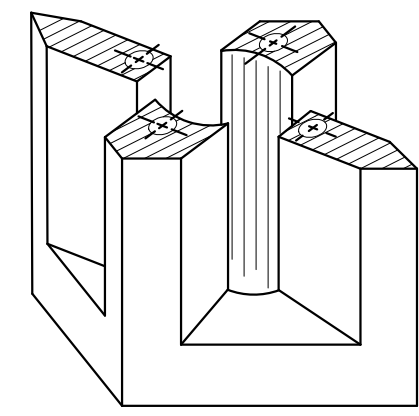
GENERAL NOTES:

1. TOP OF CONDUIT NO LESS THAN 24" (600) DEEP.
2. COMPACT BACKFILL IN ≤ 6" (150) LIFTS. HAND COMPACTION NOT PERMITTED.

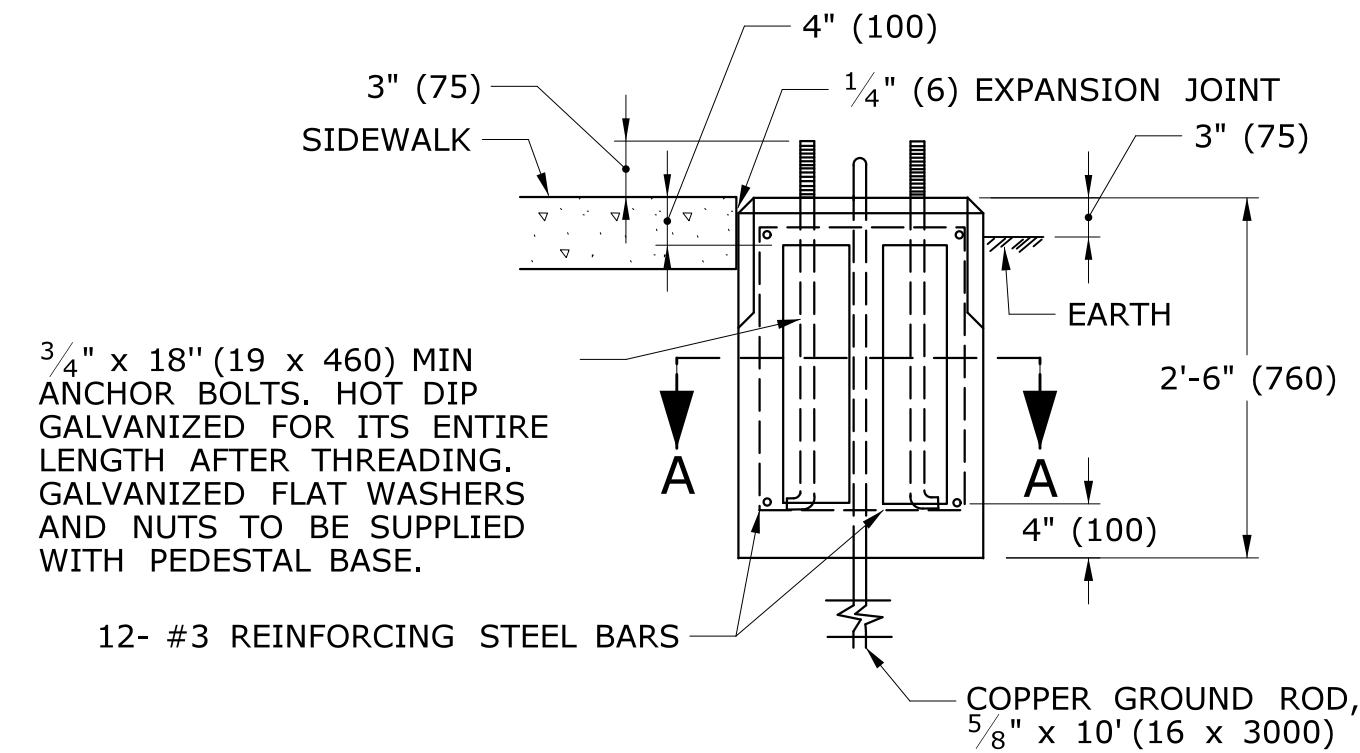
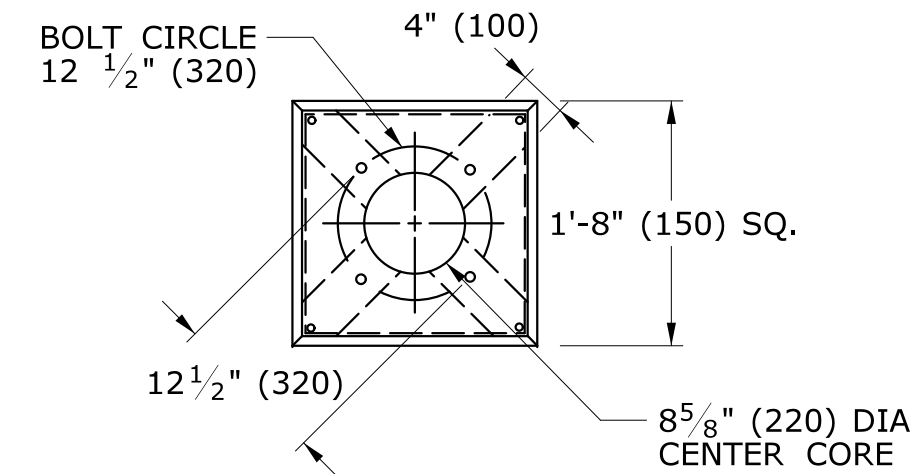
LEGEND AS SHOWN ON TRAFFIC CONTROL SIGNAL PLAN:

--- RMC (RIGID METAL CONDUIT)

<p>THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.</p>		<p>DIMENSIONS ARE IN ENGLISH (") & METRIC UNITS (mm). METRIC DIMENSIONS ARE ROUNDED: - OVER 1" TO NEAREST 5 mm. - UNDER 1" TO NEAREST 1 mm.</p>	<p>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</p>	<p>SUBMITTED BY: NAME/DATE/TIME: APPROVED BY: NAME/DATE/TIME:</p>	<p>CTDOT GUIDE SHEET OFFICE OF ENGINEERING</p>	<p>DRAWING TITLE: TRENCHING & BACKFILLING, ELECTRICAL CONDUIT</p>	<p>DRAWING NO.: TR-1001_01</p>
<p>2 12-2018 REVISED FILL & OVERLAY REQUIREMENTS, & MINOR REVISIONS</p>	<p>1 4-2012 REVISED BITUMINOUS CONCRETE TO HMA, & MINOR REVISIONS.</p>	<p>NOT TO SCALE</p>	<p>Plotted Date: 12/17/2018</p>	<p>Filename: GS_TRENCHING & BACKFILLING.DGN Model: GS_TRENCHING AND BACKFILLING</p>			
<p>REV. DATE</p>	<p>REVISION DESCRIPTION</p>						



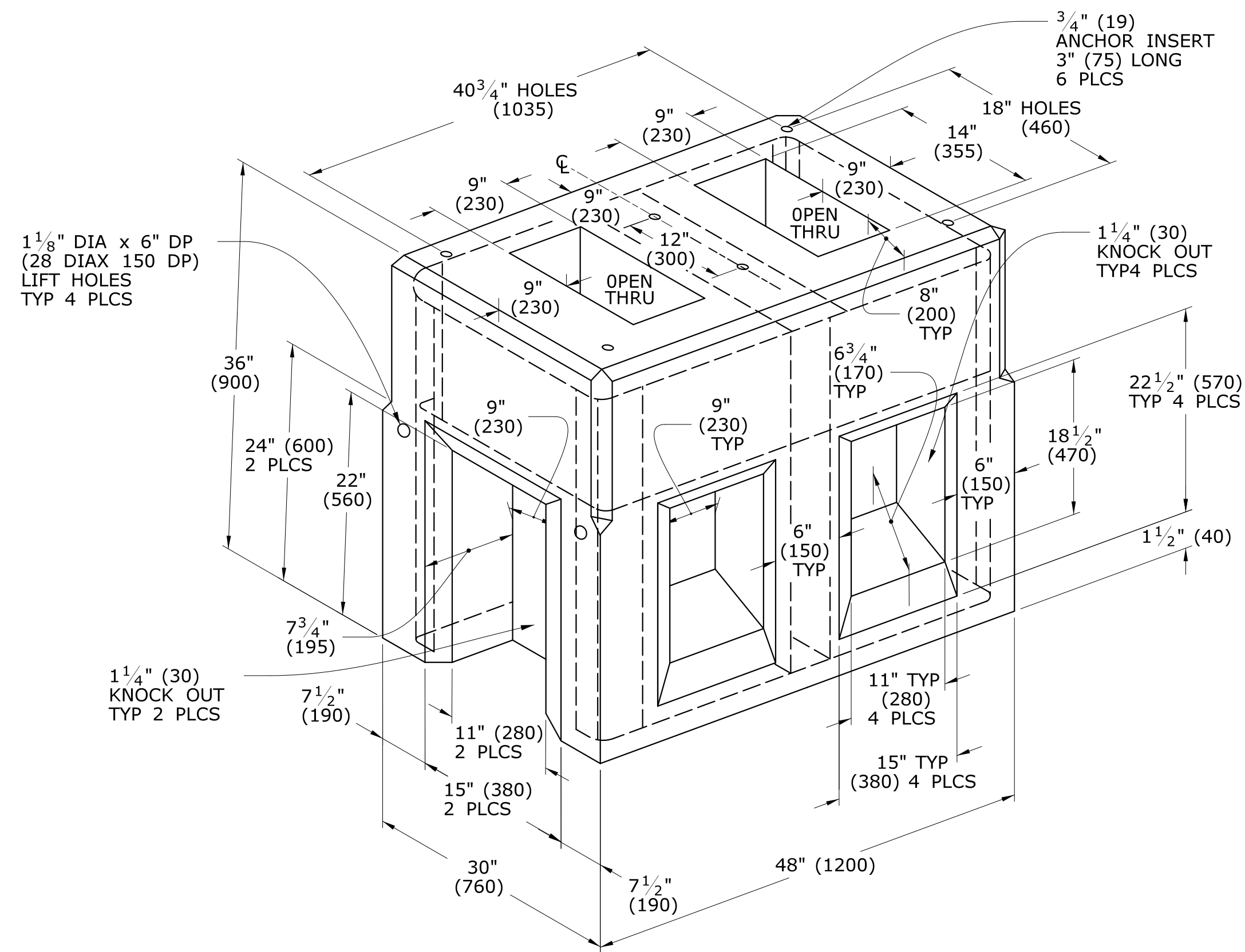
PICTORIAL SECTION A-A



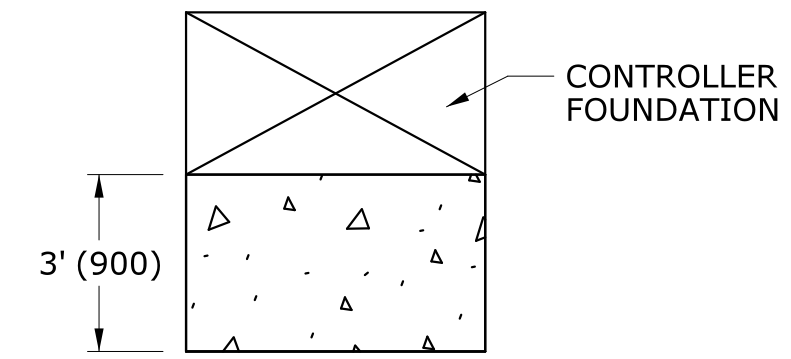
TRAFFIC CONTROL FOUNDATION PEDESTAL - TYPE I - PRECAST

NOTES:

PLACE NO. 6 CRUSHED STONE IN CENTER OPENING AFTER CONDUITS AND GROUND ROD HAVE BEEN INSTALLED.

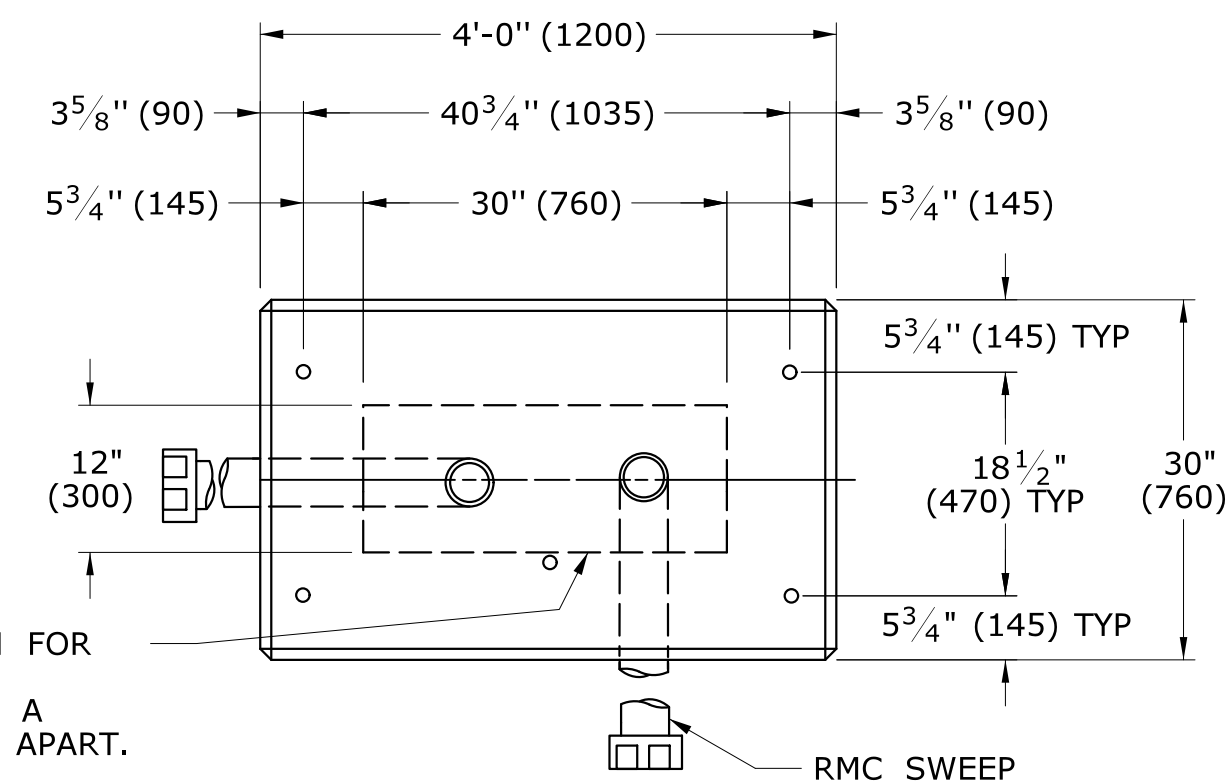


TRAFFIC CONTROL FOUNDATION CONTROLLER - TYPE IV - PRECAST

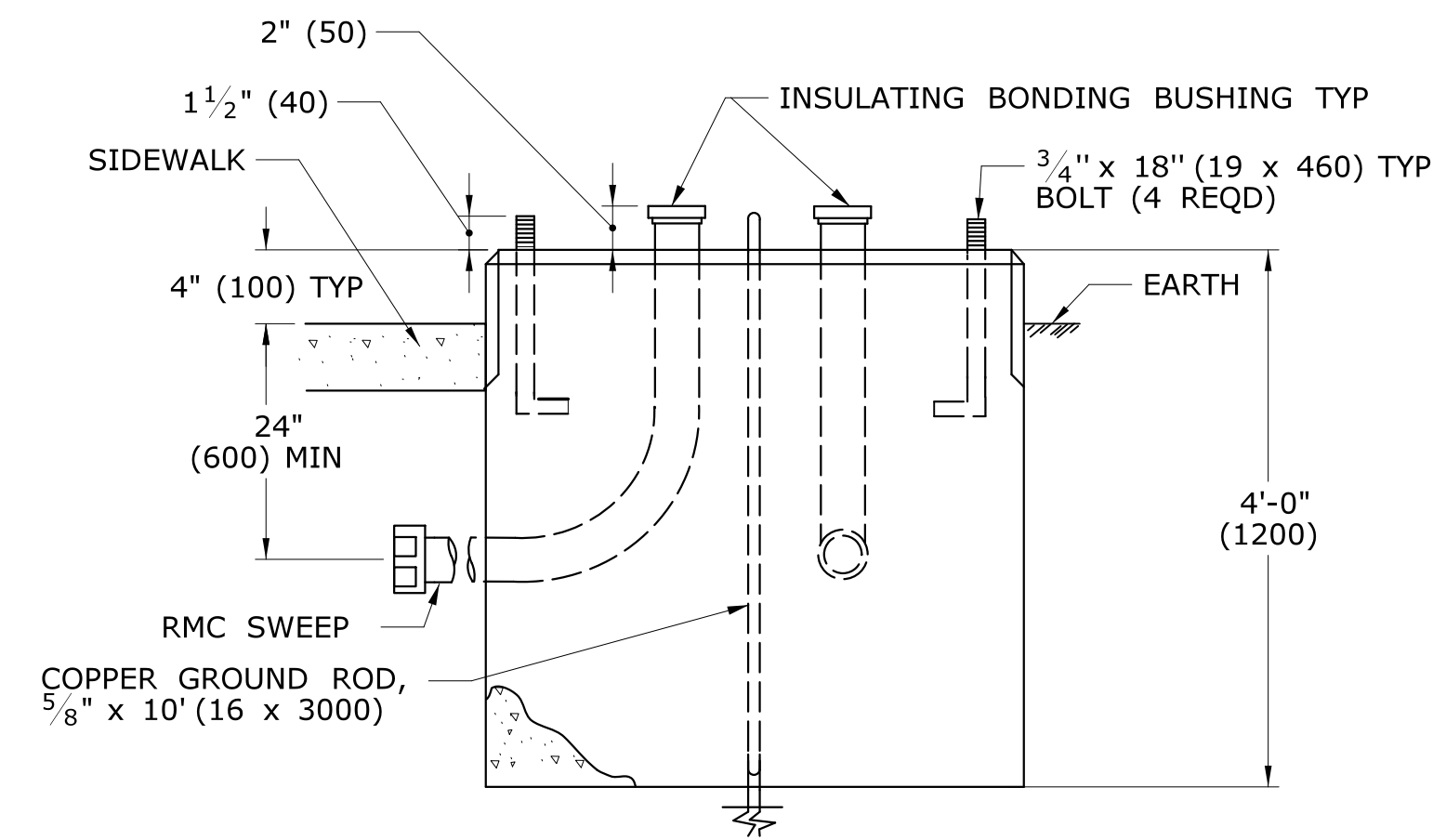


INSTALL PRECAST OR CAST IN PLACE CONCRETE SIDEWALK ON CABINET DOOR SIDE OF CONTROLLER FOUNDATION.
PITCH SIDEWALK 1/4" PER FOOT (20 PER METER) AWAY FROM THE CONTROLLER FOUNDATION.
REFER TO HIGHWAY STANDARD SHEET HW-921.01 FOR SIDEWALK CONSTRUCTION.

TYPICAL CONCRETE SIDEWALK AT CONTROLLER FOUNDATION



AREA OF LIMITATION FOR CONDUIT SWEEPS. SEPARATE CONDUITS A MINIMUM OF 2" (50) APART.



TRAFFIC CONTROL FOUNDATION CONTROLLER - TYPE IV - CAST IN PLACE

NOTES:

INSTALL FOUNDATION ON 6" (150) OF COMPACTED GRAVEL IN ACCORDANCE WITH SECTION 2.14. LEVEL FOUNDATION WITH A PROJECTION OF 4" (100) ABOVE FINISHED GRADE.
INSTALL COPPER GROUND ROD: 5/8" x 10' (16 x 3000).
PLACE NO. 6 CRUSHED STONE IN THE CENTER OPENINGS AFTER THE CONDUITS AND GROUND ROD HAVE BEEN INSTALLED. THE OPENINGS SHALL BE CAPPED WITH A 2" (50) GROUT LEVEL WITH THE TOP OF THE FOUNDATION AND NEATLY FINISHED. THE GROUT SHALL CONFORM WITH THE REQUIREMENTS OF ARTICLE M.3.01-12.
CONCRETE: CLASS "A" CONFORMING TO ARTICLE M.03.01.
#4 REBAR 2" (50) MIN COVER AROUND ALL OPENINGS, 3-#4 REBARS IN EACH CORNER. CONDUITS SHALL NOT PROJECT MORE THAN 2" (50) ABOVE FOUNDATION.

LEGEND AS SHOWN ON TRAFFIC CONTROL SIGNAL PLAN:	
	PROPOSED CONTROLLER
	EXISTING CONTROLLER
	PROPOSED STEEL SPAN POLE
	EXISTING STEEL SPAN POLE

REV.	DATE	REVISION DESCRIPTION
2	1-2014	REMOVED SPAN POLE FOUNDATION DETAILS, REVISED TYPICAL CONCRETE SIDEWALK AT CONTROLLER FOUNDATION.
1	4-2012	MINOR REVISIONS.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 1/7/2014

DIMENSIONS ARE IN ENGLISH ("') & METRIC UNITS (mm). METRIC DIMENSIONS ARE ROUNDED: - OVER 1" TO NEAREST 5 mm. - UNDER 1" TO NEAREST 1 mm.

NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

File name: CTDOT_TRAFFIC_STD.DGN Model: TR-1002_01

SUBMITTED BY: NAME/DATE/TIME:
APPROVED BY: NAME/DATE/TIME:

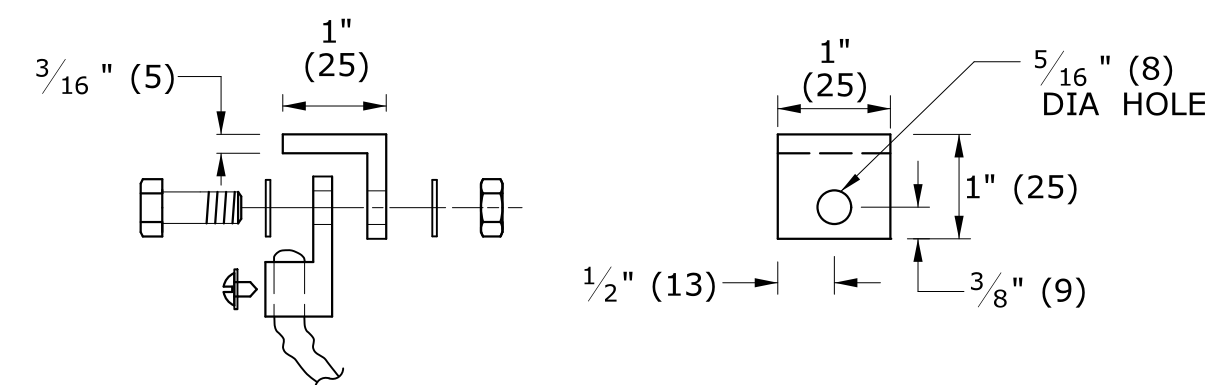
CTDOT
STANDARD SHEET
OFFICE OF ENGINEERING

STANDARD SHEET TITLE:
TRAFFIC CONTROL FOUNDATIONS

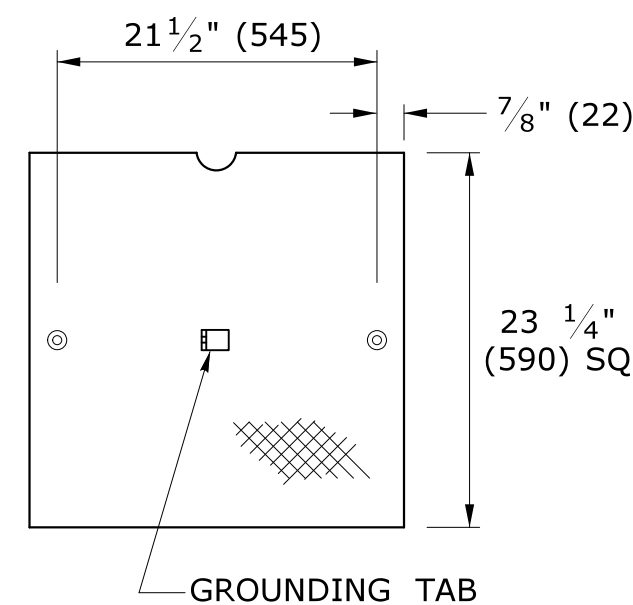
STANDARD SHEET NO.:
TR-1002_01

COVER NOTES:

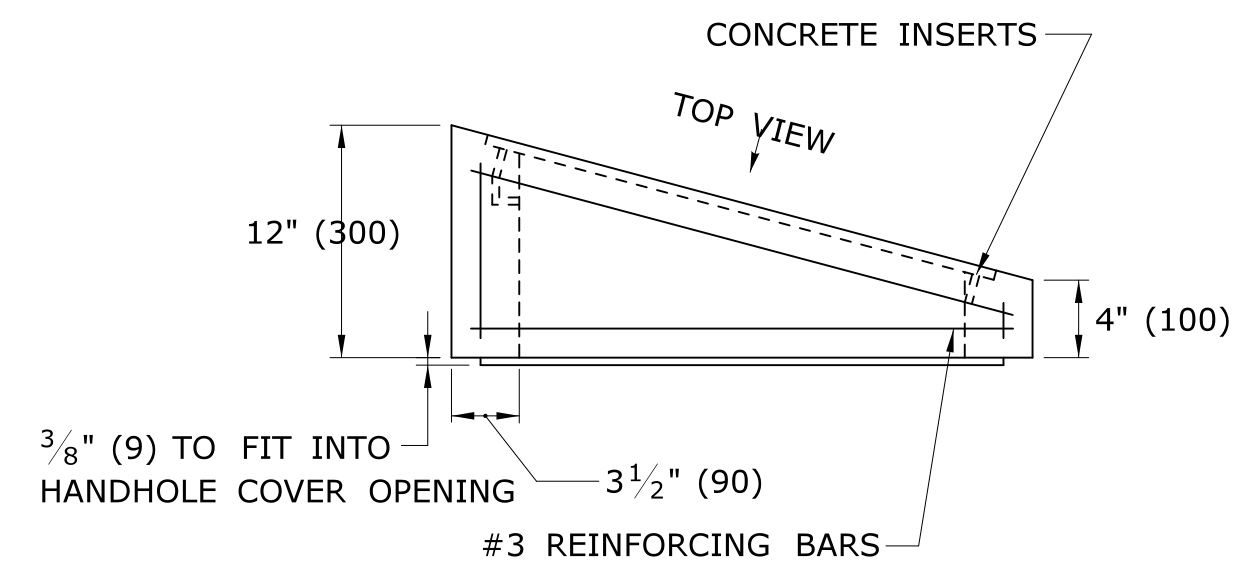
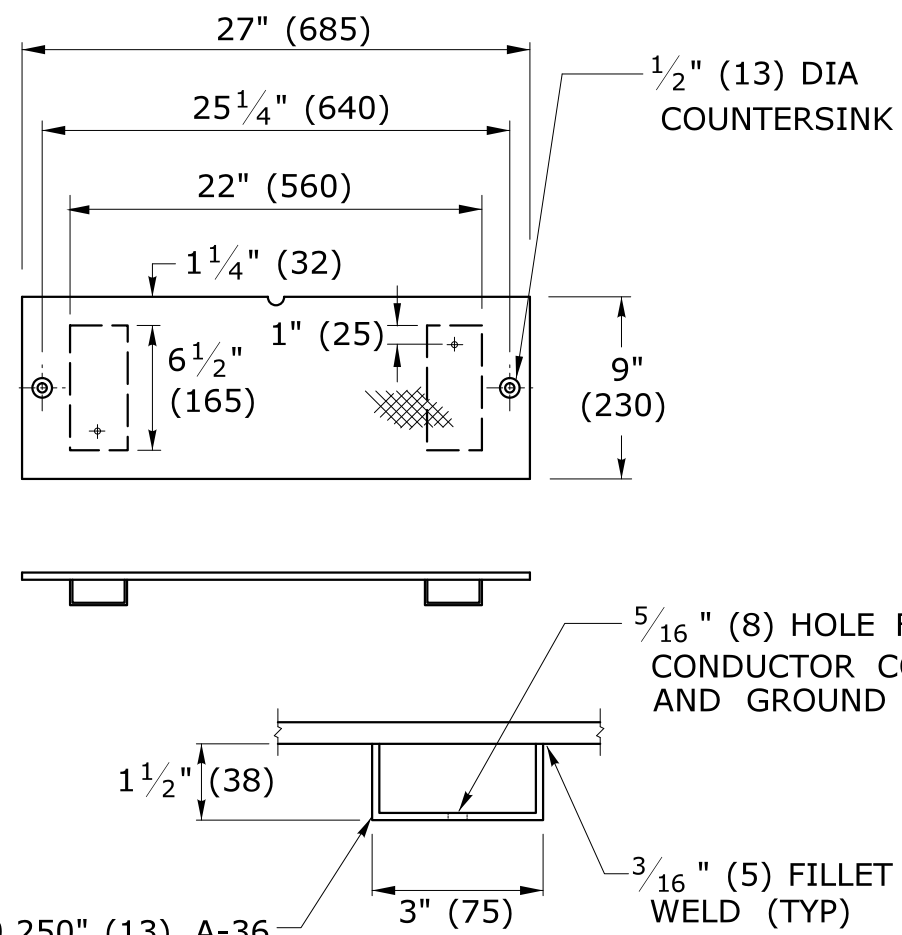
1. GROUNDING TAB WELDED TO BOTTOM CENTER OF COVER WITH $\frac{3}{16}$ " (5) WELD (3 SIDES).
2. ATTACH 6' (2 m) LENGTH OF NO. 8 GROUND WIRE TO GROUNDING TAB WITH CONDUCTOR CONNECTOR, $\frac{1}{4}$ " - 20 X $\frac{3}{4}$ " (M6 X 20) LG SST HEX HEAD BOLT, AND SST FLAT WASHER. ATTACH FREE END OF GROUND WIRE TO CONDUIT BONDING BUSHING IN HANDHOLE.
3. CONDUCTOR CONNECTOR: COPPER ALLOY BODY, BRASS SCREW, BRASS OR COPPER ALLOY PRESSURE PLATE.
4. COVER SCREW INSERT: $\frac{3}{8}$ "-16 (9-16), $1\frac{1}{2}$ "L (37L), STAINLESS STEEL.
5. COVER SCREW: $\frac{3}{8}$ "-16 (9-16), 1"L (25L), FLAT HEAD, SLOTTED, STAINLESS STEEL.



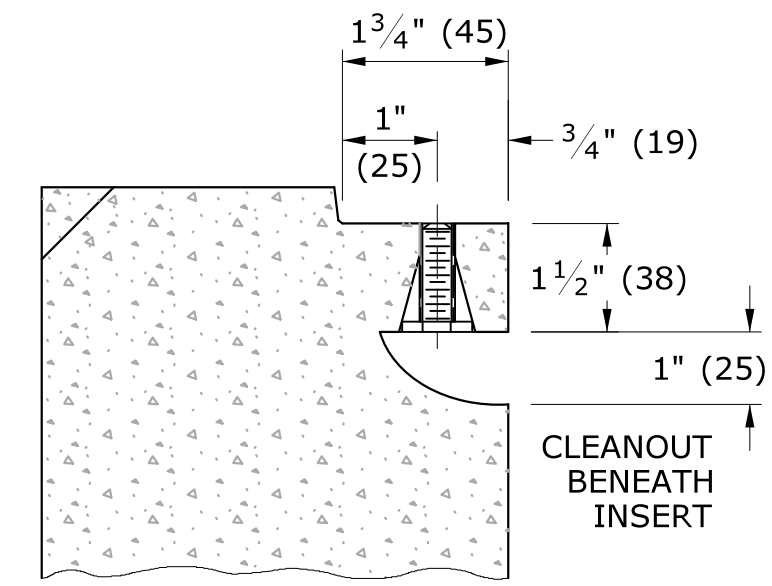
**STEEL GROUNDING TAB
w/ CONDUCTOR CONNECTOR**



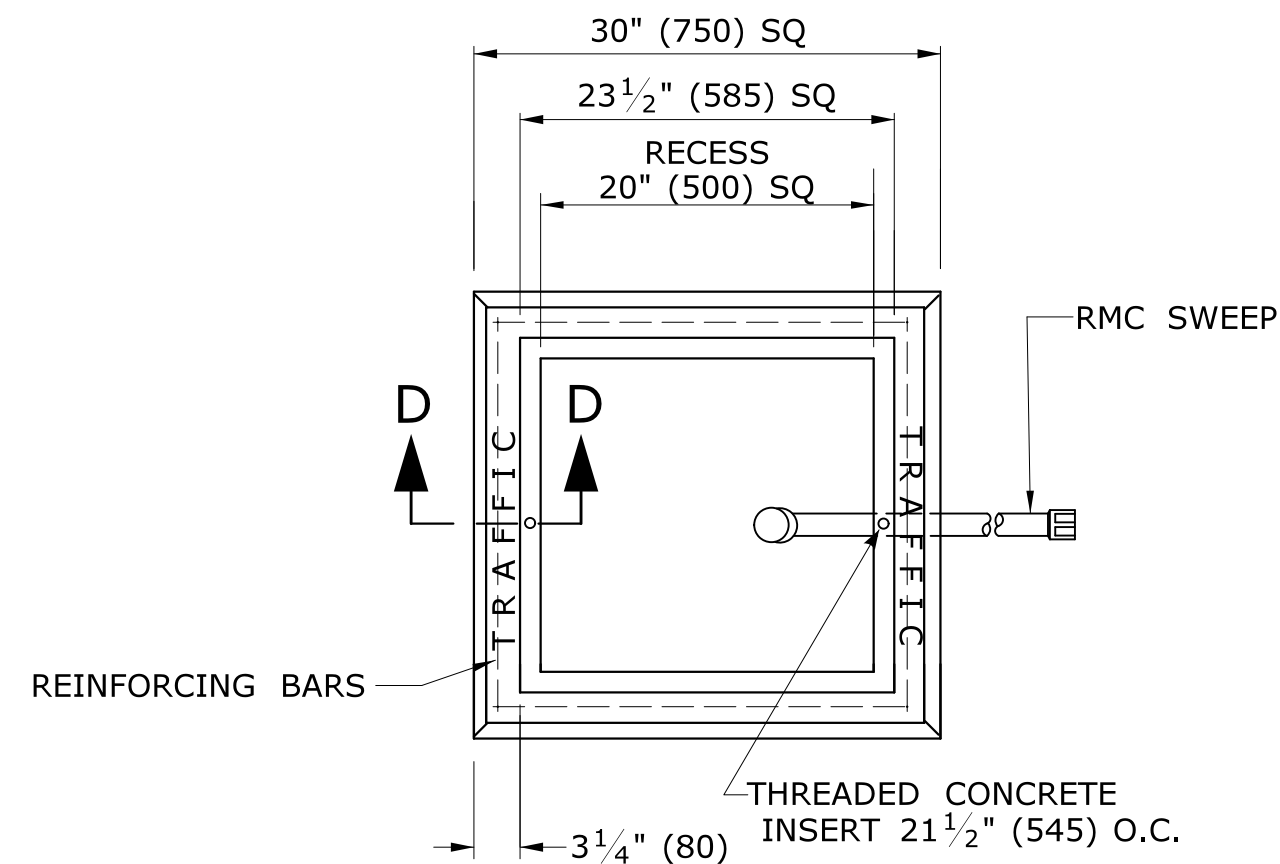
**NON SKID FLOOR PLATE
GALVANIZED STEEL, 3/8" (10)**



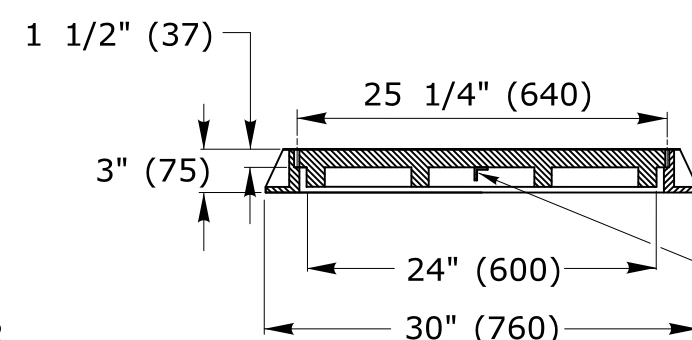
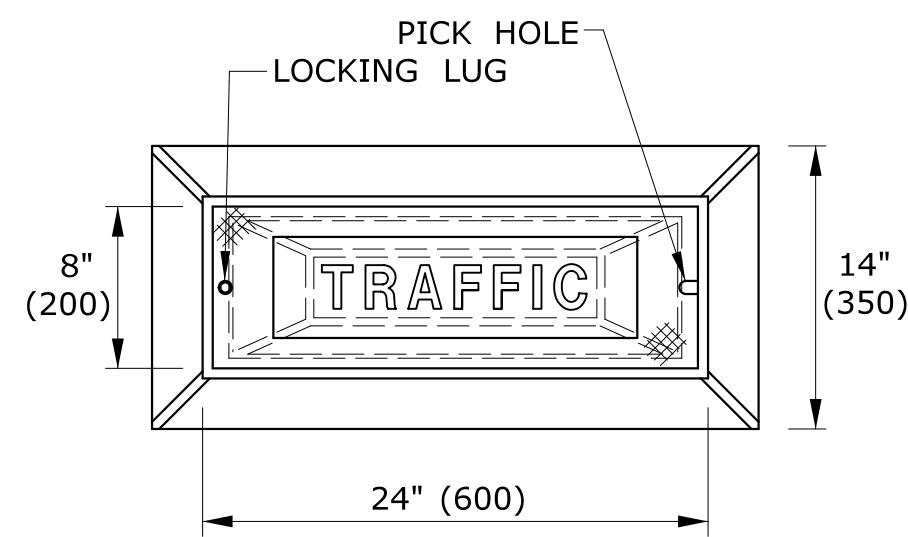
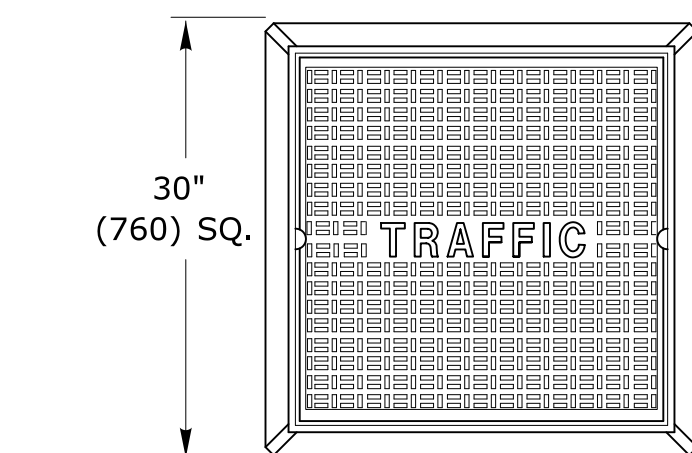
BANK ADAPTER



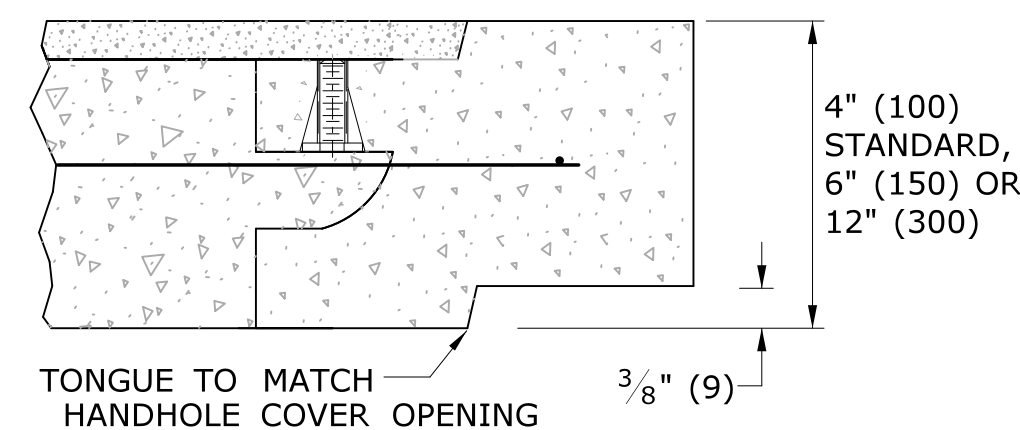
SECTION D-D



PLAN VIEW

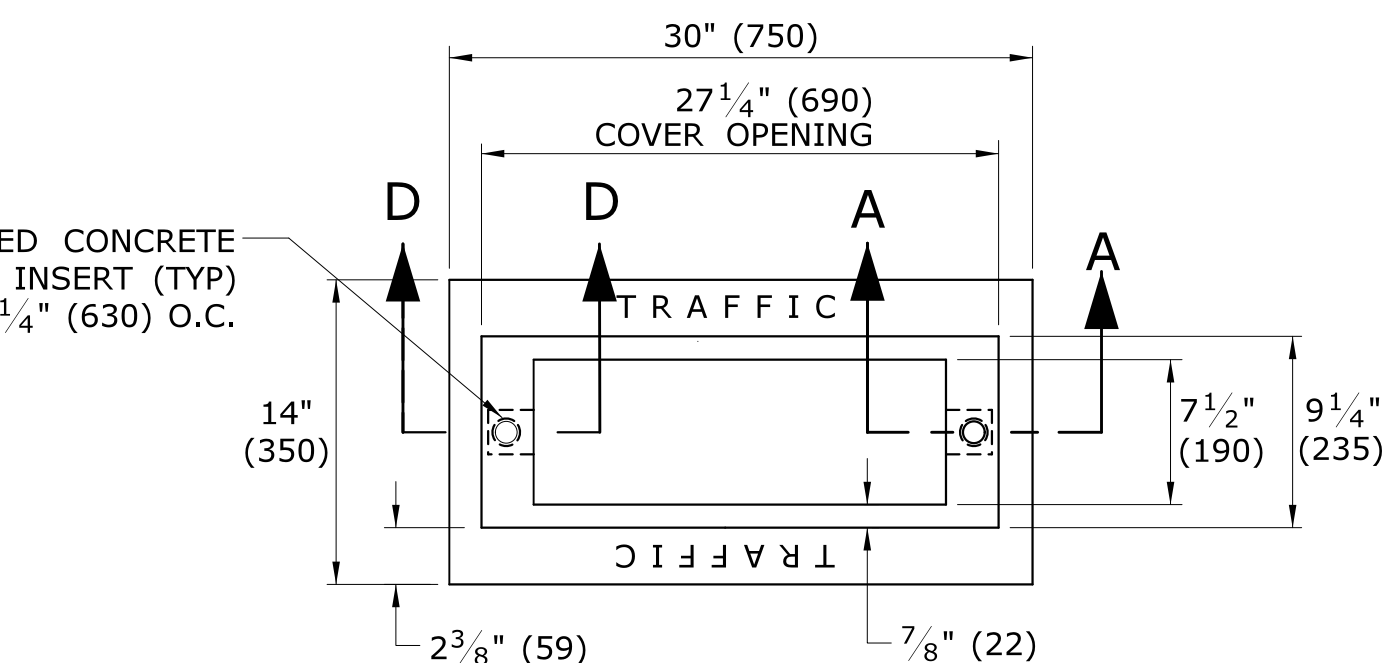


**CAST IRON
HANDHOLE COVERS**

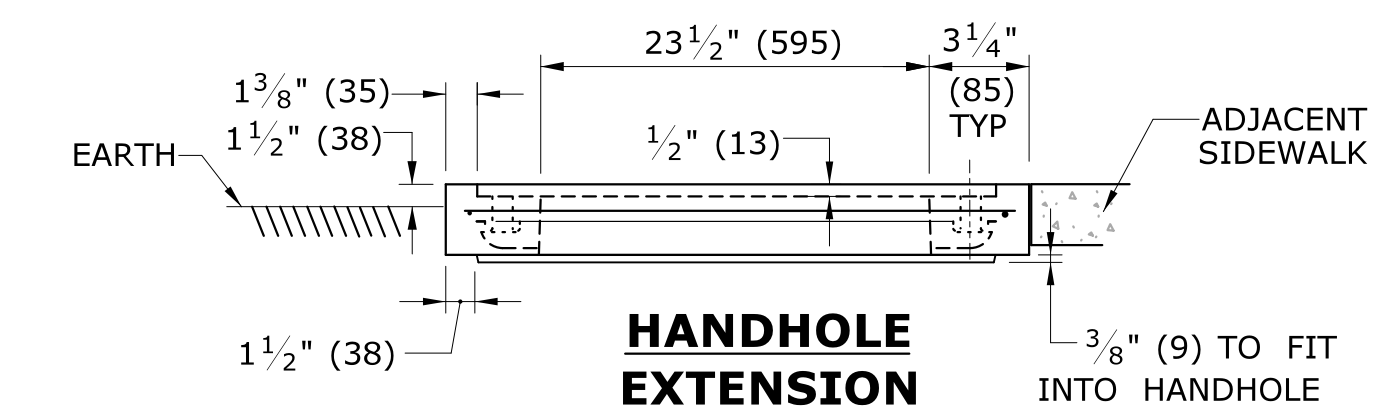


**SECTION A-A
HANDHOLE EXTENSIONS**

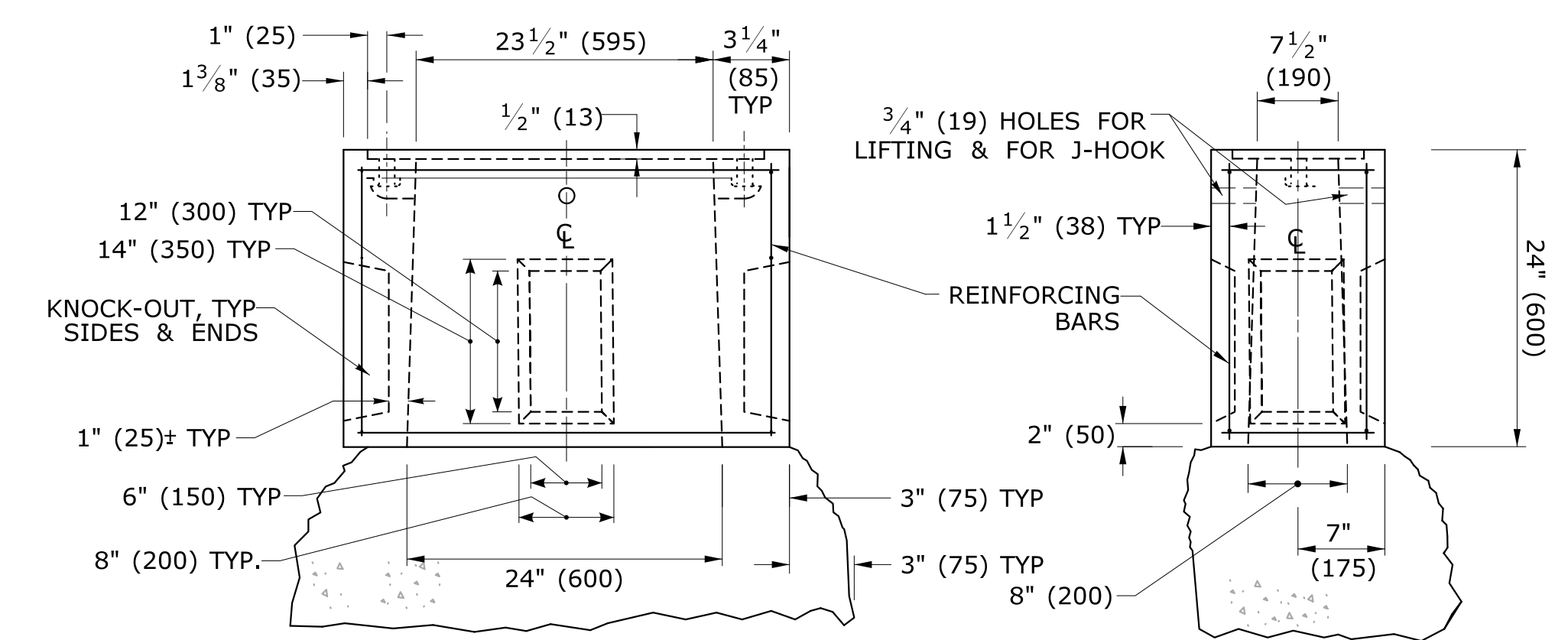
4 - #8 REINFORCING BARS REQ'D



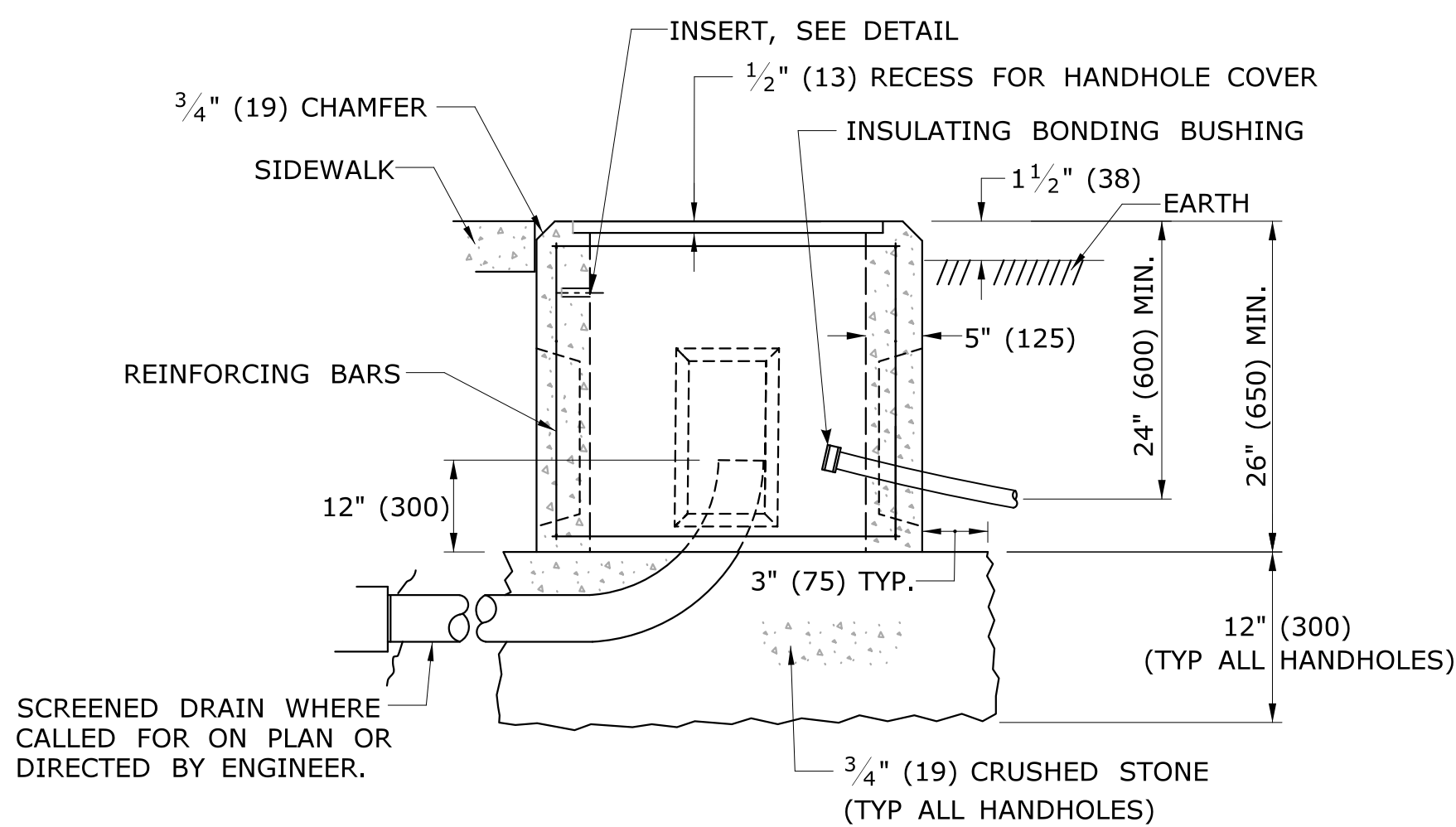
PLAN VIEW



**HANDHOLE
EXTENSION**



**BASE SECTION
CONCRETE HANDHOLE TYPE II**



CONCRETE HANDHOLE TYPE I

HANDHOLE NOTES:

1. MINIMUM CLASS "C" CONCRETE.
2. COMPLETE TYPE II HANDHOLE:
IN EARTH AREAS, CONSISTS OF A BASE SECTION WITH 4" (100) HANDHOLE EXTENSION,
IN SIDEWALK AREAS, CONSISTS OF A BASE SECTION WITH 4" (100) CAST IRON COVER.
3. PLAN VIEW DIMENSIONS, SECTION VIEW, & DETAILS, SAME FOR BASE SECTION, EXTENSIONS & BANK ADAPTER.
4. GROUT AROUND ALL CONDUITS.

5. INSTALL 30" (750) SIDE PARALLEL TO ROAD UNLESS OTHERWISE NOTED.
6. INSTALL HANDHOLES APPROX. 12" (300) BEHIND CURB OR
IF NO CURB, 24" (600) BEHIND EDGE OF ROAD UNLESS OTHERWISE SPECIFIED.
7. CAST THE WORD "TRAFFIC" INTO TOP EDGE OF HANDHOLE, 1 1/2" (38) LETTERS.
8. WHERE AN EXISTING CONCRETE SIDEWALK SLAB ABUTTING A HANDHOLE IS DAMAGED OR CUT DURING INSTALLATION, REPLACE THE ENTIRE SIDEWALK SECTION.
9. 12-#3 REINFORCING BARS REQUIRED FOR ALL HANDHOLES. (8 HORIZONTAL, 4 VERTICAL)

LEGEND AS SHOWN ON TRAFFIC CONTROL SIGNAL PLAN:

- PROPOSED HANDHOLE
- EXISTING HANDHOLE

REV.	DATE	REVISION DESCRIPTION
2	4-2014	REVISED HANDHOLES NOTES, ADDED NOTE #6. ADDED "J" HOOK TO INSERT DETAIL.
1	4-2012	CAST IRON COVER: CHANGED BOLT TO PICK HOLE. ADDED EXTENSIONS, C-CHANNEL, CONDUCTOR CONNECTOR & MINOR REVISIONS.

Plotted Date: 4/11/2014

NOT TO SCALE

DIMENSIONS ARE IN ENGLISH (") & METRIC UNITS (mm). METRIC DIMENSIONS ARE ROUNDED: - OVER 1" TO NEAREST 5 mm. - UNDER 1" TO NEAREST 1 mm.

**STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION**

Filename: CTDOT_TRAFFIC_STD.DGN Model: TR-1010_01

SUBMITTED BY: NAME/DATE/TIME:

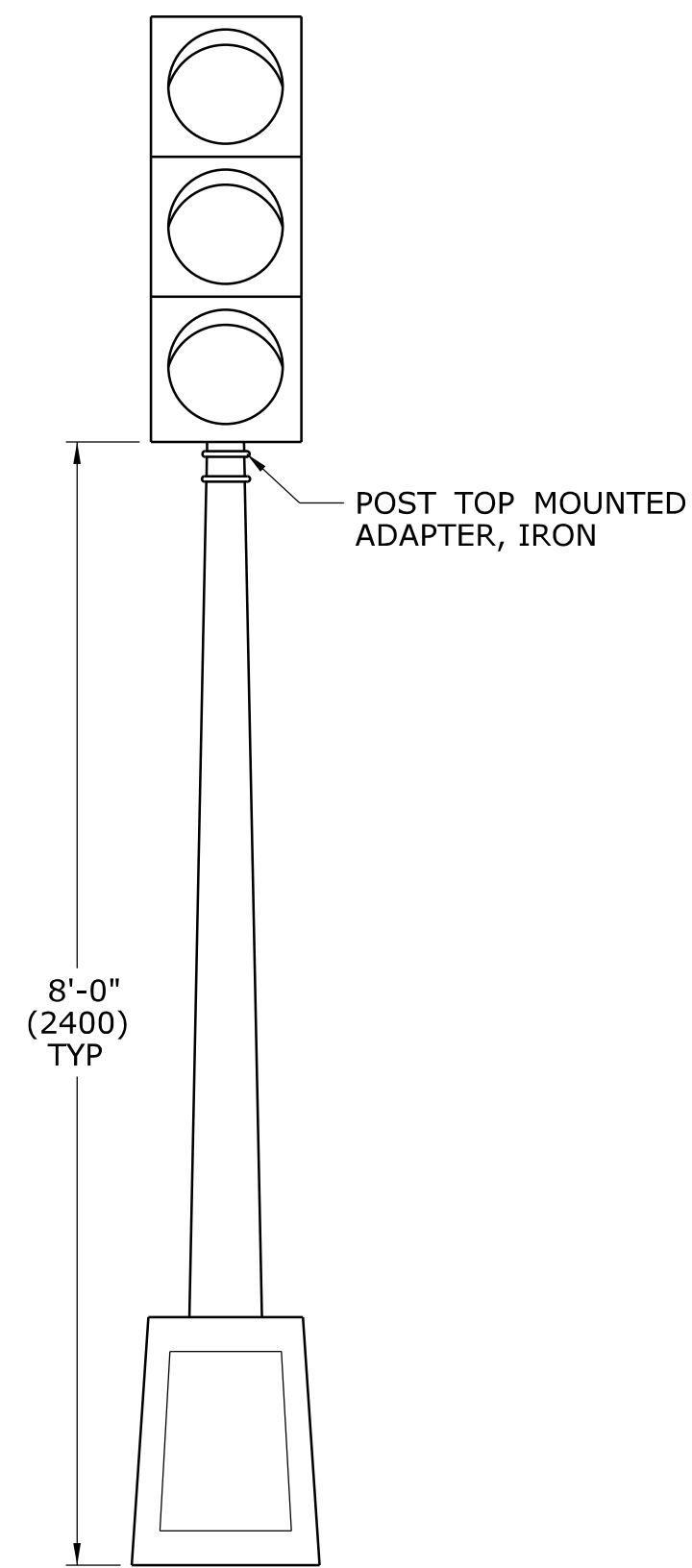
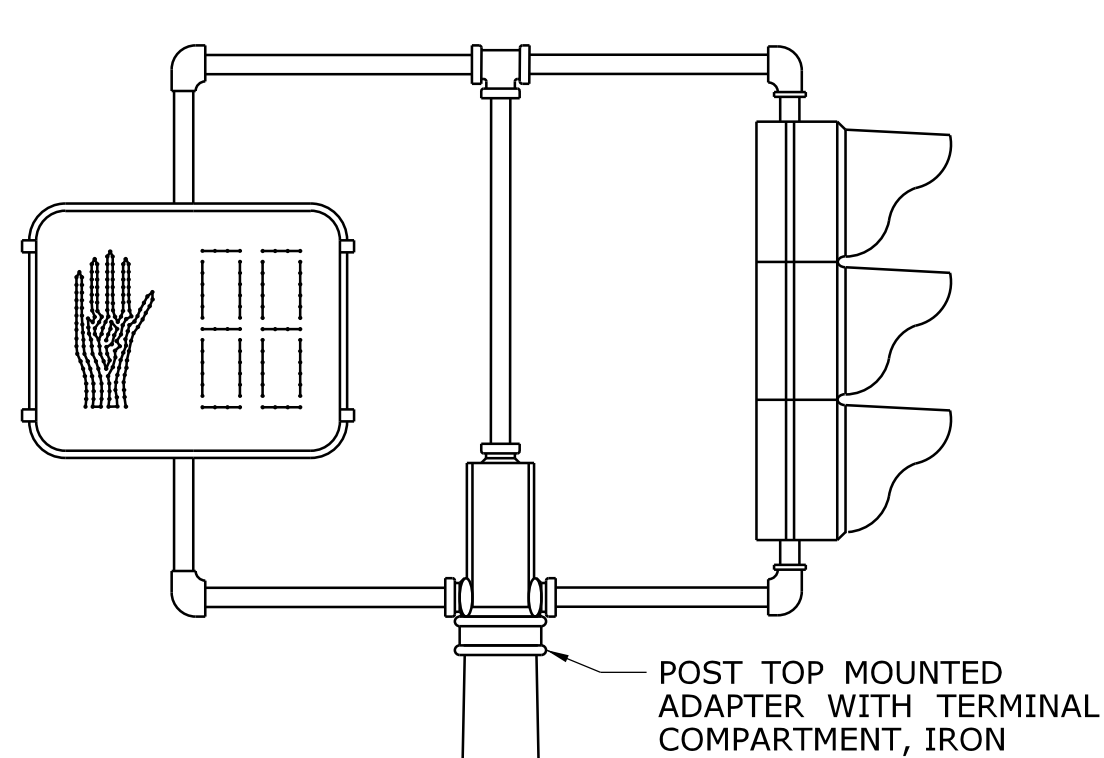
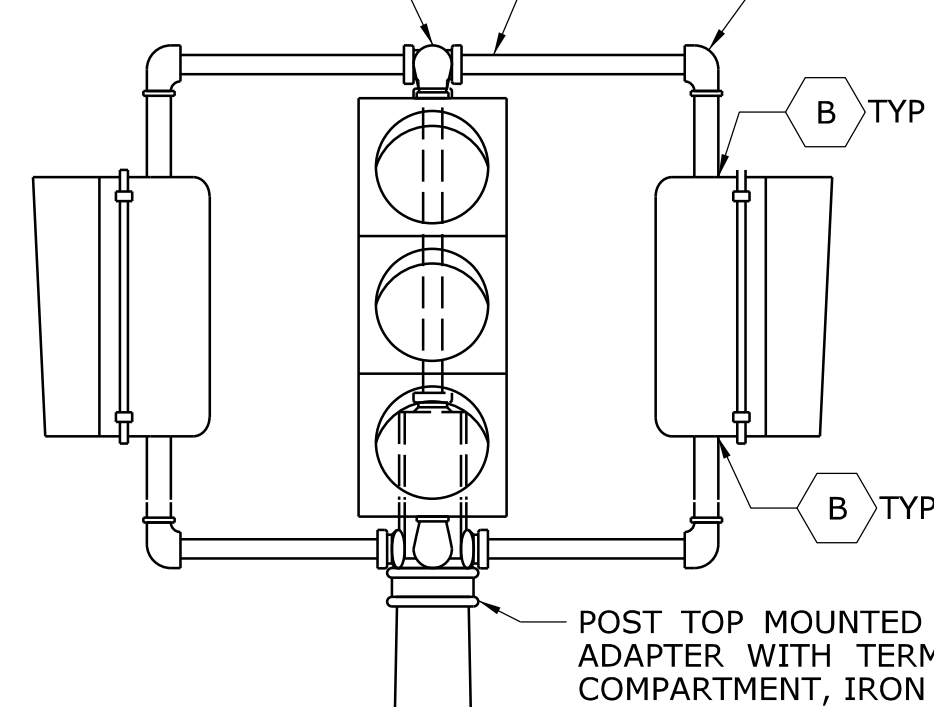
APPROVED BY: NAME/DATE/TIME:

**CTDOT
STANDARD SHEET
OFFICE OF ENGINEERING**

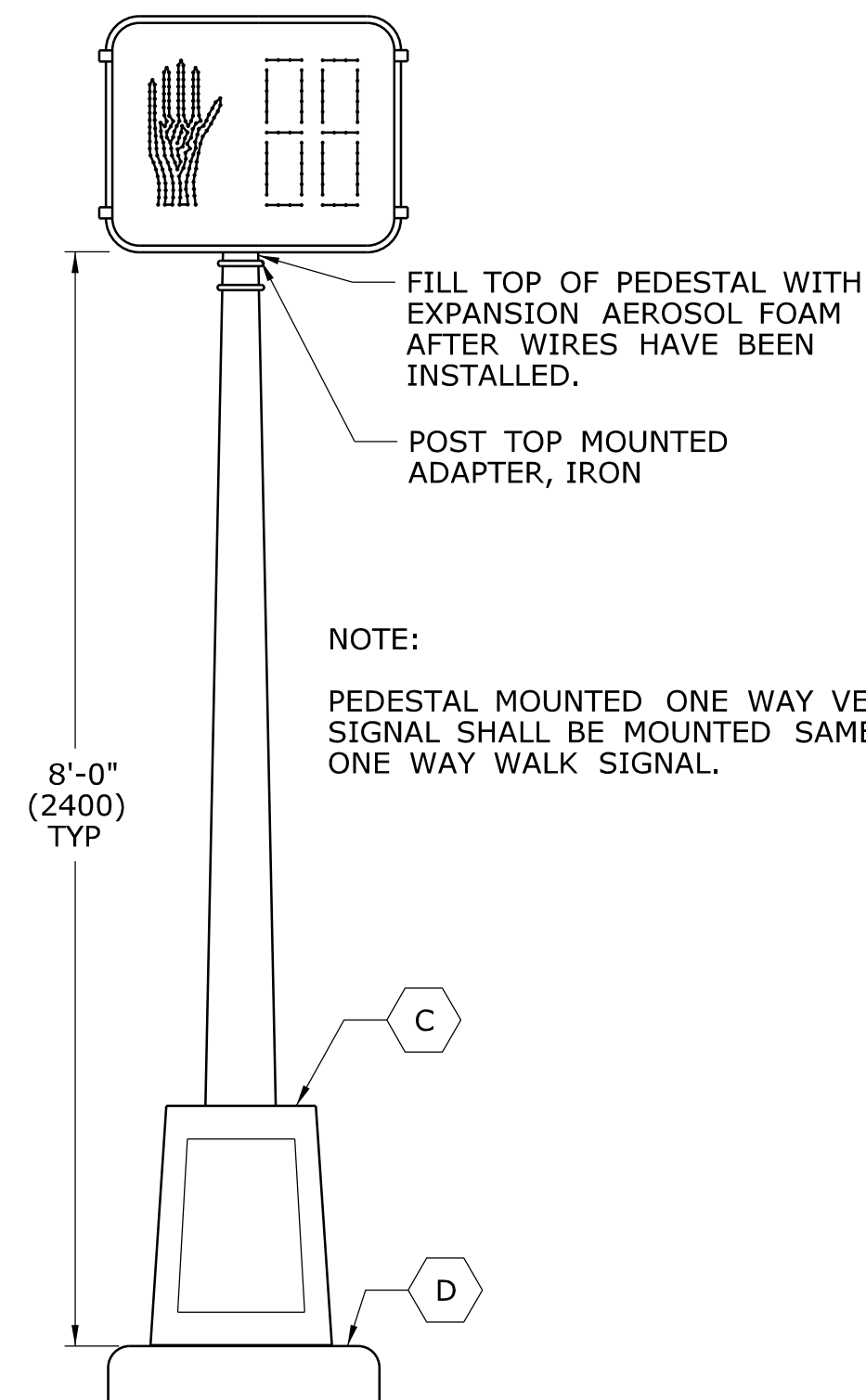
STANDARD SHEET TITLE:
CONCRETE HANDHOLE

STANDARD SHEET NO.:
TR-1010_01

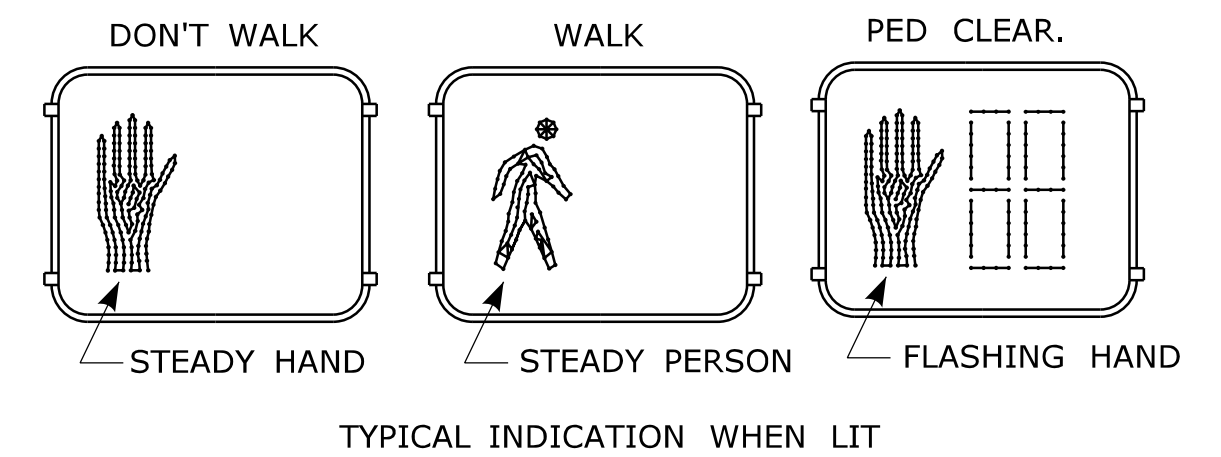
1 1/2" (38) SSIDE OUTLET TEE, IRON, TYP
 1 1/2" (38) NIPPLE, STEEL, TYP



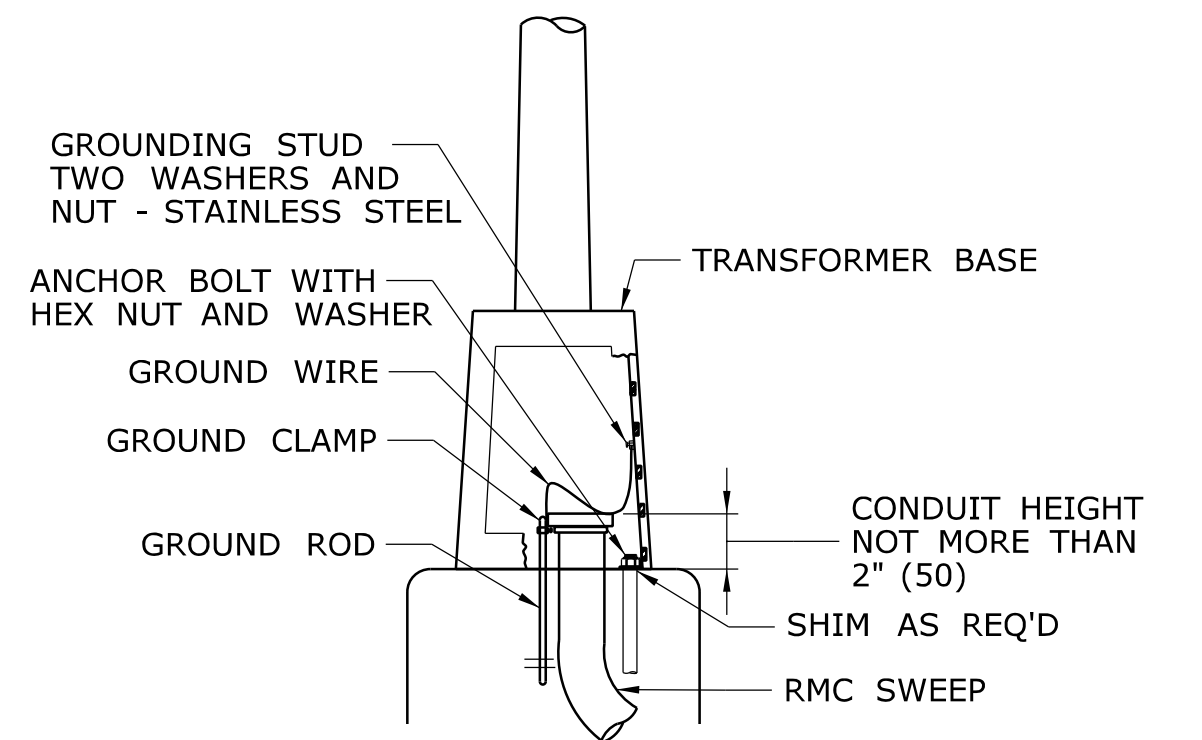
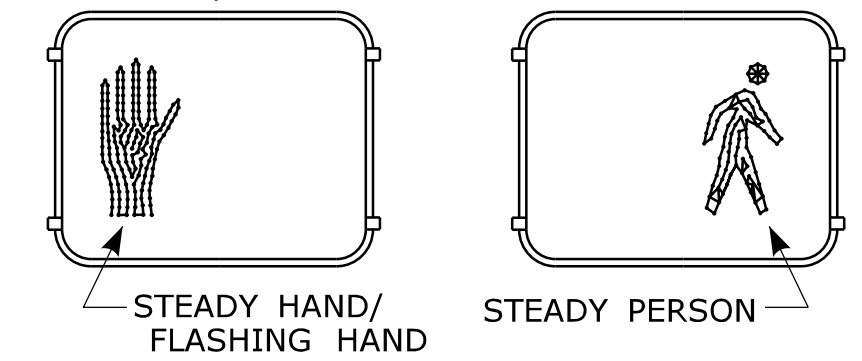
ONE WAY TRAFFIC SIGNAL PEDESTAL MOUNTED



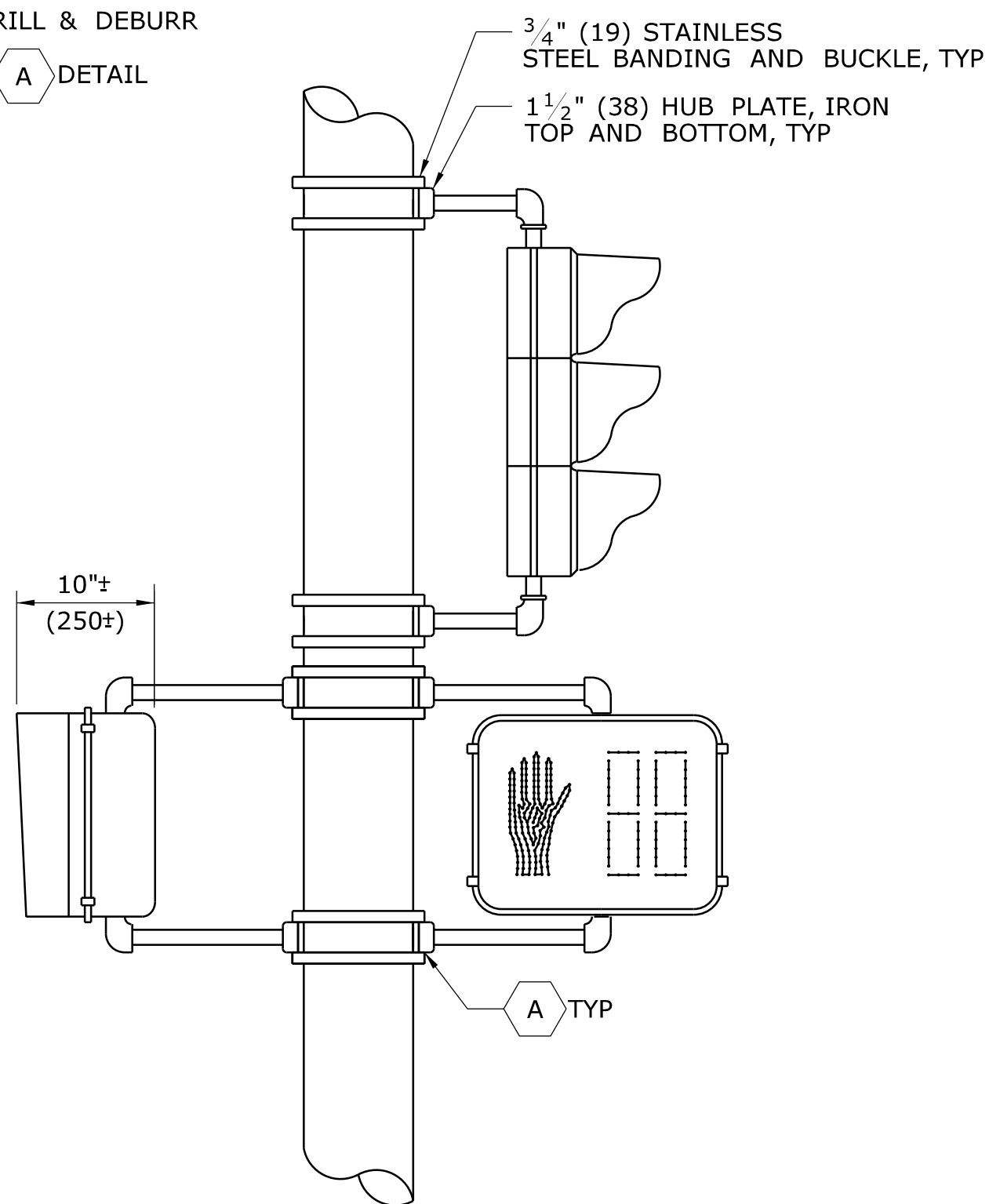
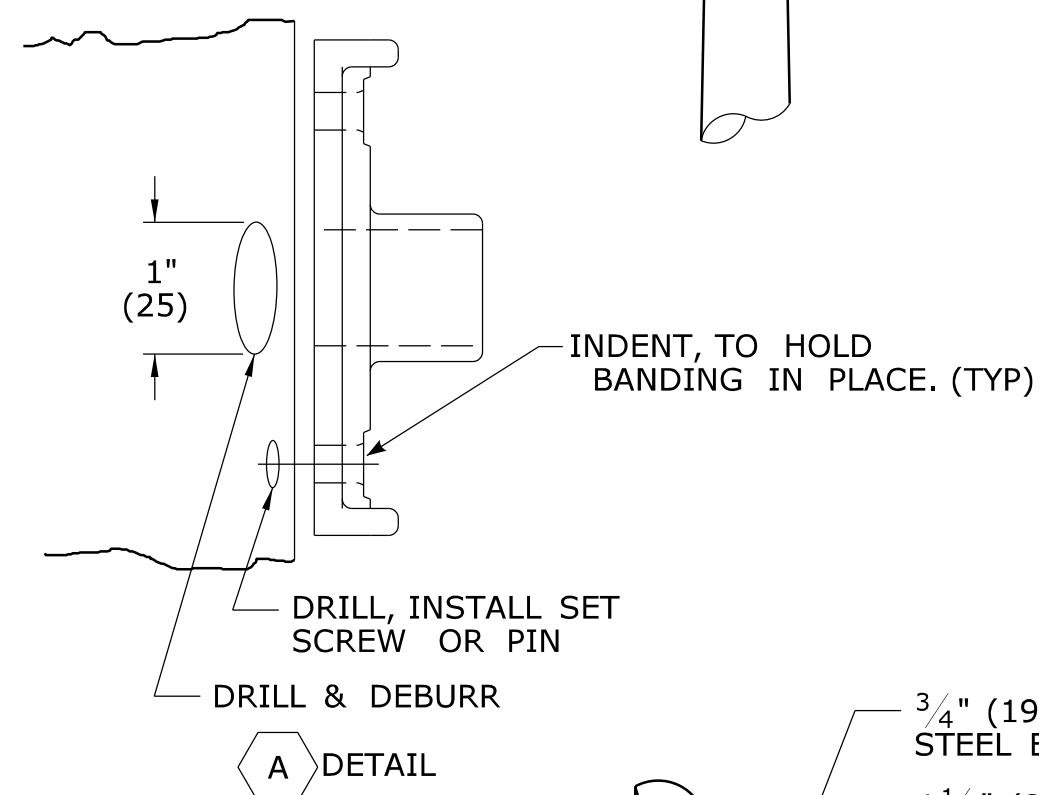
ONE WAY WALK SIGNAL PEDESTAL MOUNTED



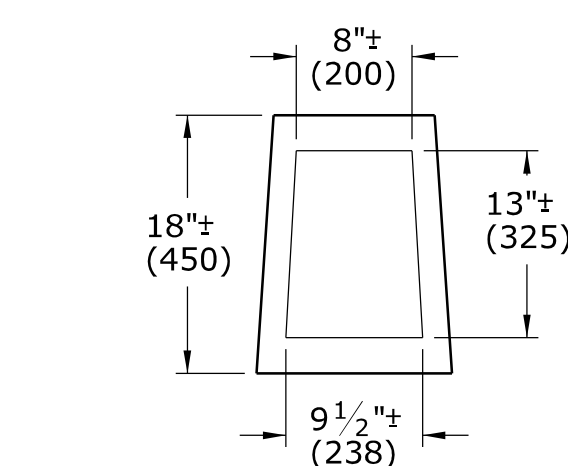
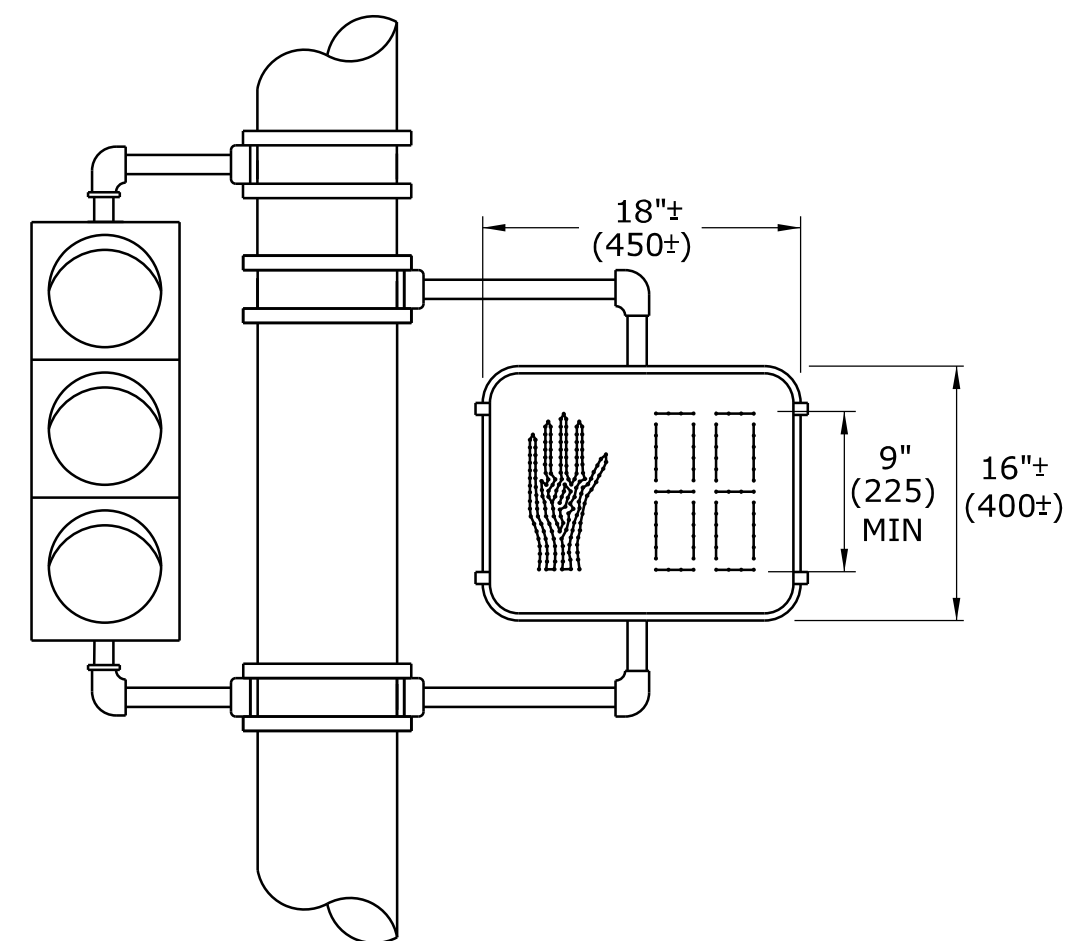
NON-COUNTDOWN DISPLAY, ONLY WHEN SHOWN ON PLAN. DON'T WALK/PED CLEAR. WALK



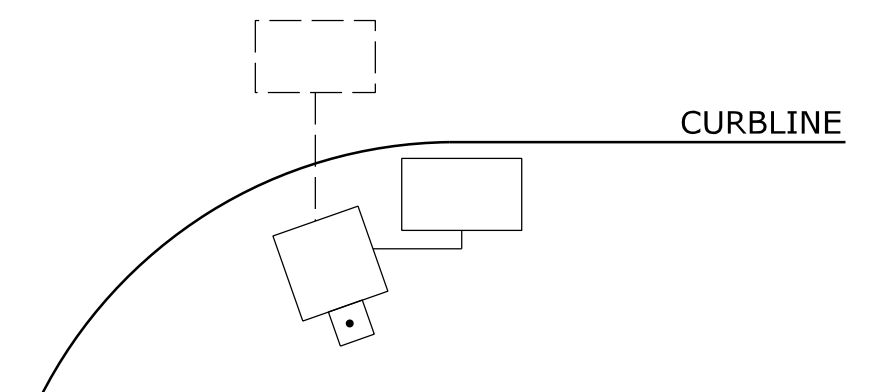
ALUMINUM PEDESTAL INSTALLATION DETAIL



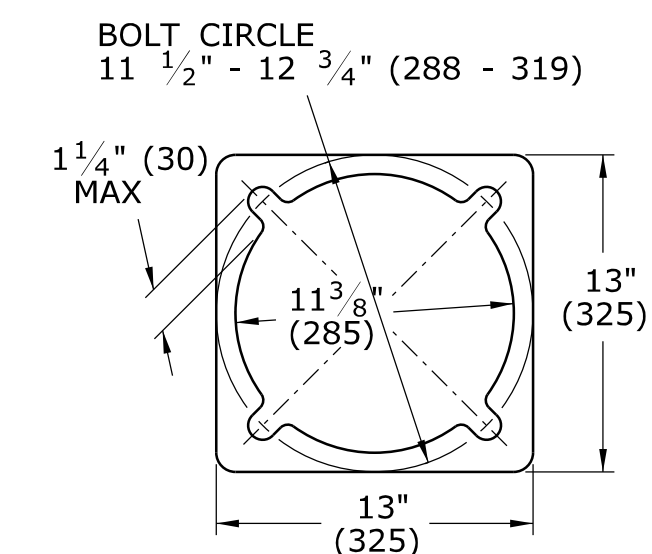
ONE WAY TRAFFIC SIGNAL POLE MOUNTED



ALUMINUM PEDESTAL DOOR OPENING DETAIL



WHEN PEDESTALS OR SPAN POLES ARE INSTALLED CLOSE TO THE CURB, SIDE MOUNT PEDESTRIAN OR TRAFFIC SIGNALS TO AVOID VISOR DAMAGE FROM TURNING VEHICLES.



ALUMINUM PEDESTAL BASE PLAN

NOTES:

- A SECURE LOWER HUB PLATE WITH STAINLESS STEEL SET SCREW OR PIN PRIOR TO BANDING TO PREVENT MOVEMENT. INSTALL CABLE THROUGH BOTTOM OF HUB PLATE.
- B REFER TO CTDOT TRAFFIC STANDARD SHEET, TR-1105.01, TRAFFIC SIGNALS & CABLE ASSIGNMENTS.
- C IF THREADED, MIN 1" (25) THREADED INTO BASE, SECURED WITH STAINLESS STEEL SET SCREWS.
- D BASE DESIGNED AS BREAK-AWAY.

INCANDESCENT WALK SIGNAL LAMPS ARE 67 WATTS, RATED AT 8000 HOURS LAMP LIFE. LED WALK SIGNAL LAMPS ARE MAXIMUM 15 WATTS, WARRANTED AT 5 YEAR LIFE.

LEGEND AS SHOWN ON TRAFFIC CONTROL SIGNAL PLAN:		□ PEDESTRIAN SIGNAL
□	STEEL SPAN POLE, MAST ARM ASSEMBLY SHAFT	□ PEDESTAL MOUNTED, TRAFFIC & PEDESTRIAN SIGNALS
□	ALUMINUM PEDESTAL	□ POLE MOUNTED, TRAFFIC & PEDESTRIAN SIGNALS
□	TRAFFIC SIGNAL	

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DIMENSIONS ARE IN ENGLISH (") & METRIC UNITS (mm). METRIC DIMENSIONS ARE ROUNDED: - OVER 1" TO NEAREST 5 mm - UNDER 1" TO NEAREST 1 mm.

NOT TO SCALE



Filename: CTDOT_TRAFFIC_STD.dgn Model: TR-1102_01

SUBMITTED BY: NAME/DATE/TIME:

APPROVED BY: NAME/DATE/TIME:

CTDOT STANDARD SHEET
OFFICE OF ENGINEERING

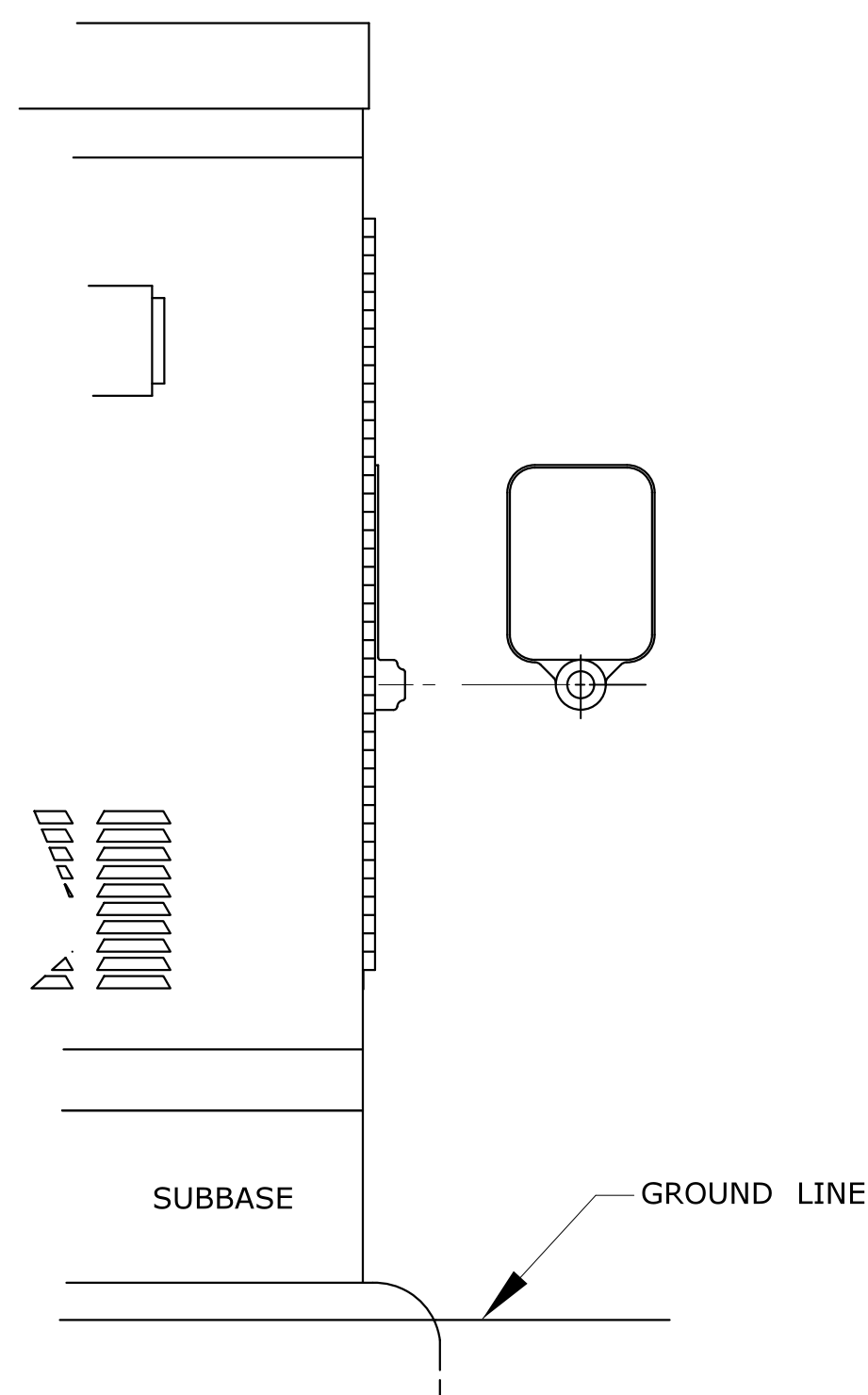
STANDARD SHEET TITLE: STANDARD SHEET NO.:

PEDESTALS, PEDESTRIAN SIGNALS

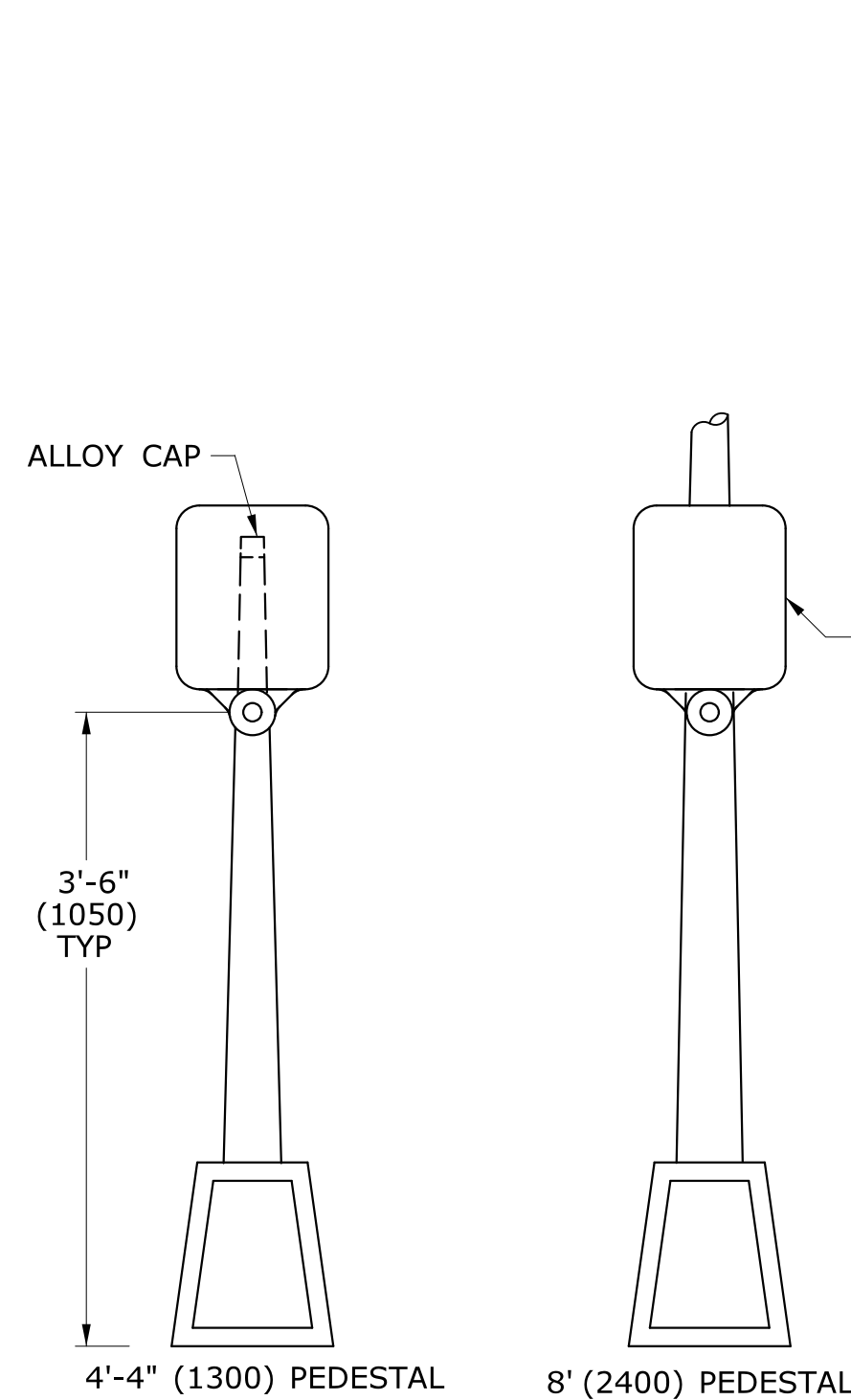
TR-1102_01

REV.	DATE	REVISION DESCRIPTION
2	4-2012	MINOR REVISIONS.
1	1-2010	INCLUDED COUNTDOWN PEDESTRIAN SIGNALS.

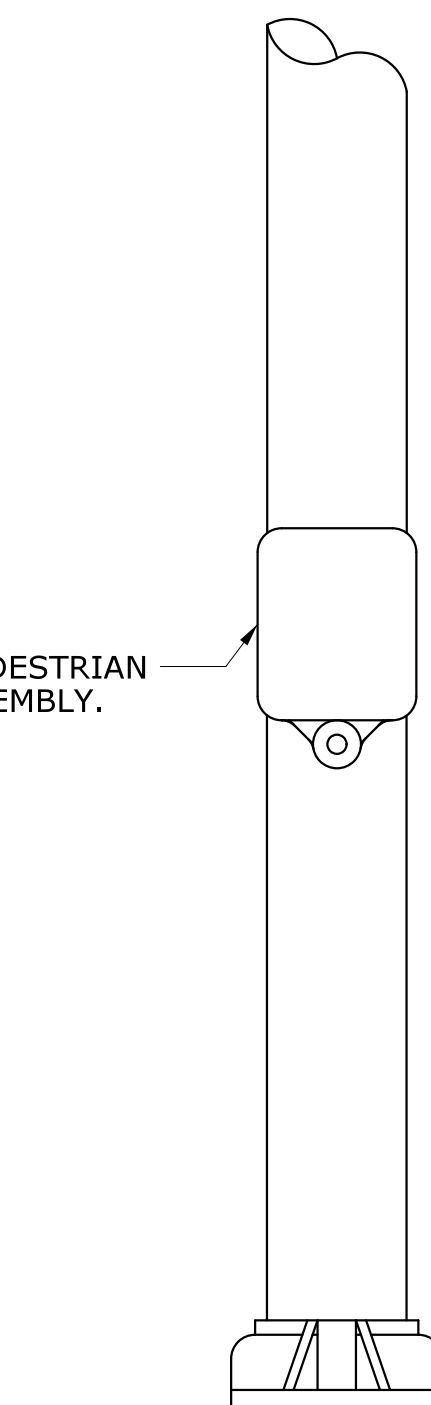
Plotted Date: 4/14/2012



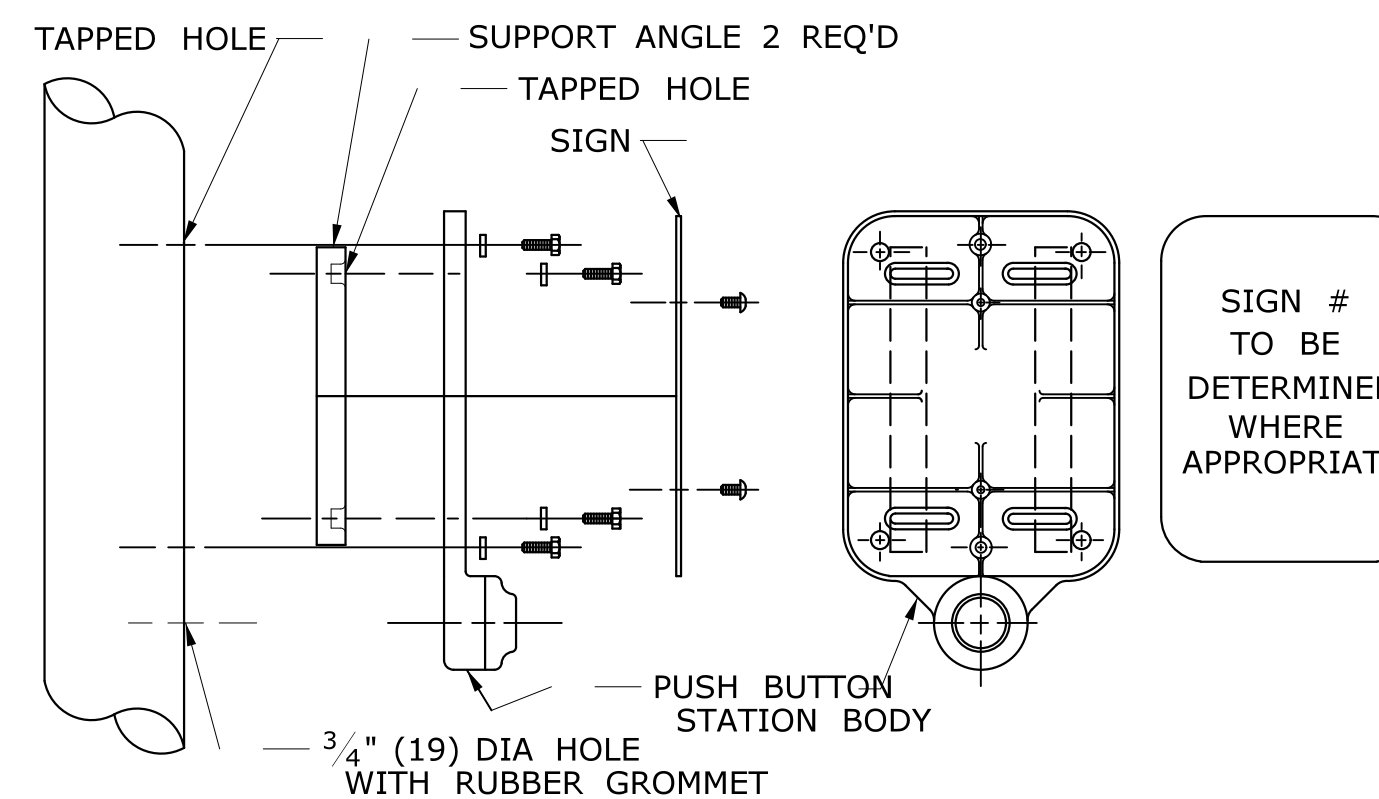
SURFACE MOUNTED



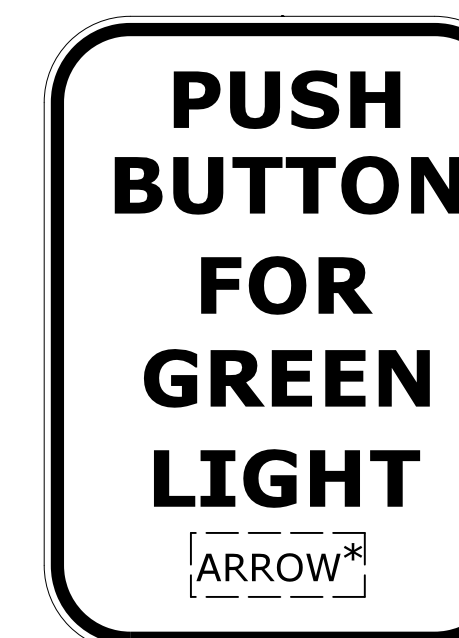
PEDESTAL MOUNTED



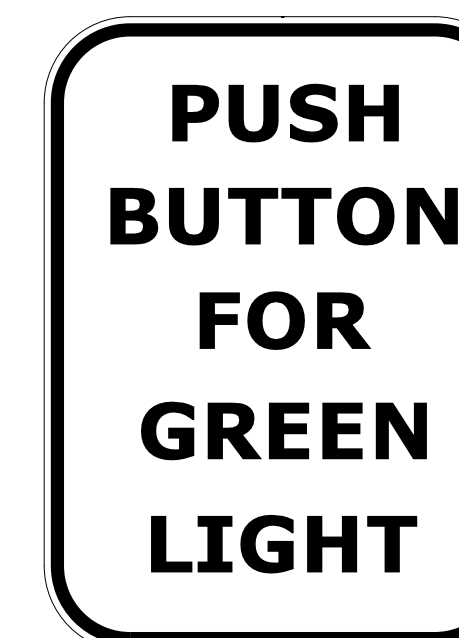
SPAN POLE/MAST ARM MOUNTED



DETAIL A



SIGN # 31-0833
* USE APPROPRIATE ARROW UNLESS OTHERWISE NOTED ON PLAN.

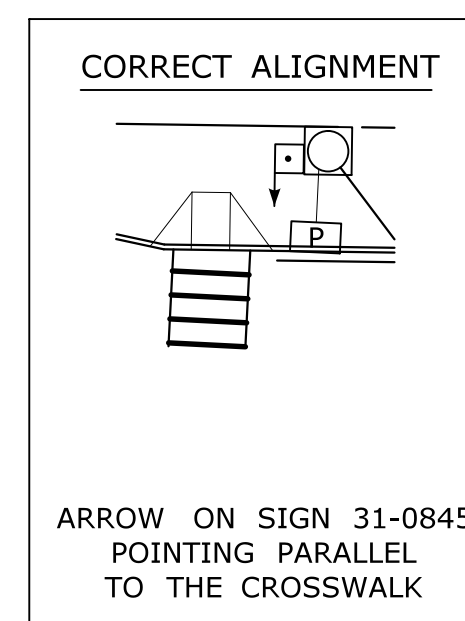


SIGN # 31-0835

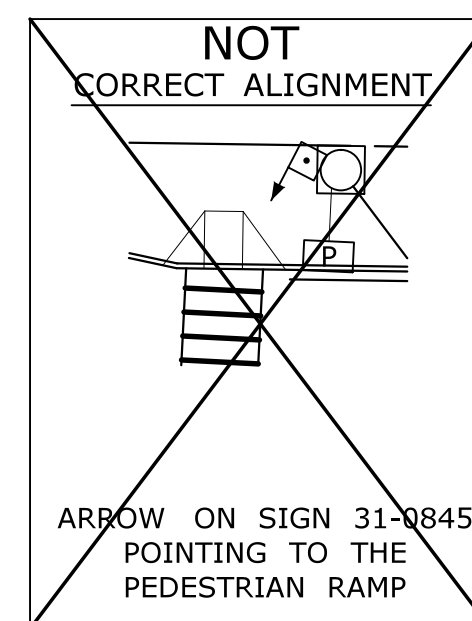
FOR CROSSING WITH SIDE STREET GREEN

GENERAL NOTES:

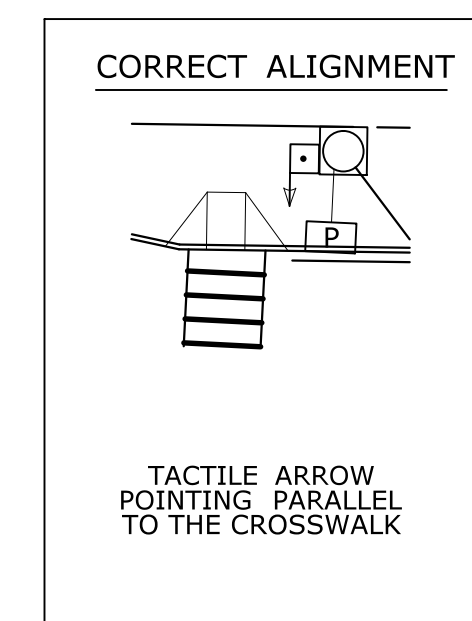
3'-6" (1050) FROM FINISHED GRADE SUCH AS SIDEWALK TO CENTER OF PUSH BUTTON.
 PUSH BUTTON INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN, CURRENT EDITION GOVERNS.
 4'-4" (1300) PEDESTAL TO INCLUDE ALLOY CAP SECURED WITH STAINLESS STEEL SET SCREW.



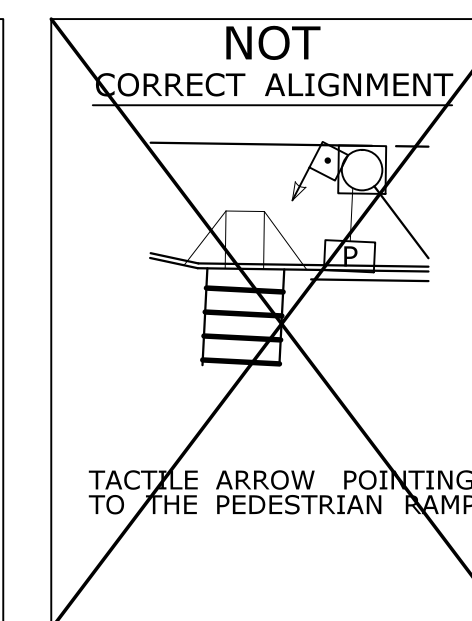
PEDESTRIAN PUSH BUTTON ALIGNMENT



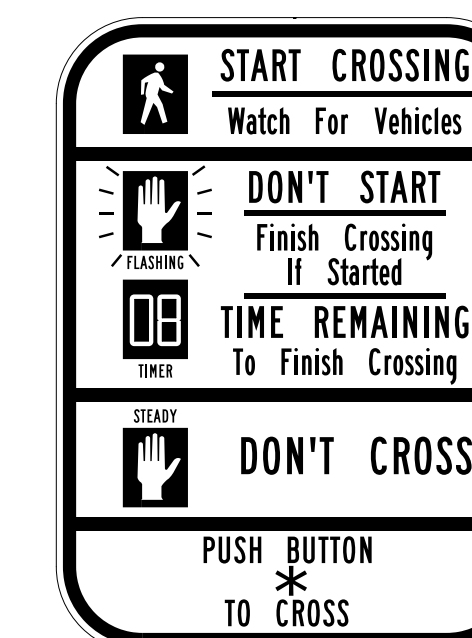
NOT CORRECT ALIGNMENT



ACCESSIBLE PEDESTRIAN SIGNAL AND DETECTOR



NOT CORRECT ALIGNMENT



SIGN # 31-0845
* USE APPROPRIATE ARROW UNLESS OTHERWISE NOTED ON PLAN.

EXAMPLE ALIGNMENTS FOR EXCLUSIVE PEDESTRIAN PHASE

LEGEND AS SHOWN ON TRAFFIC CONTROL SIGNAL PLAN:

	PEDESTRIAN PUSH BUTTON
	PEDESTRIAN PUSH BUTTON, PEDESTAL MOUNTED
	PEDESTRIAN PUSH BUTTON, POLE MOUNTED

REV.	DATE	REVISION DESCRIPTION
2	4-2014	ADDED PEDESTRIAN EXAMPLE ALIGNMENTS
1	4-2012	MINOR REVISIONS & UPDATED SIGN #31-0845.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 4/25/2014

DIMENSIONS ARE IN ENGLISH (") & METRIC UNITS (mm).
 METRIC DIMENSIONS ARE ROUNDED:
 - OVER 1" TO NEAREST 5 mm.
 - UNDER 1" TO NEAREST 1 mm.

NOT TO SCALE

STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION

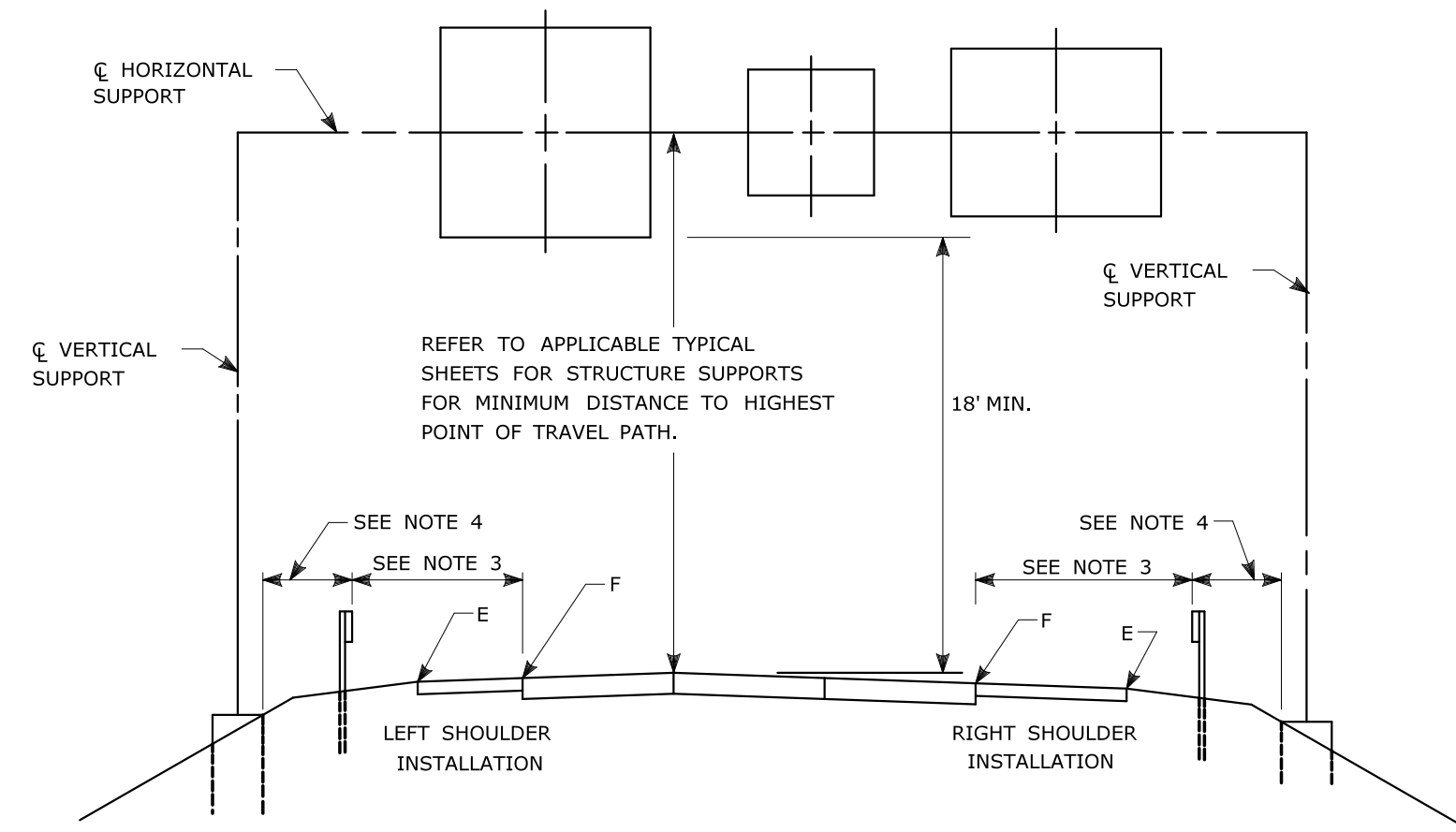
FILENAME: CTDOT_TRAFFIC_STD.DGN Model: TR-1107_01

SUBMITTED BY: NAME/DATE/TIME:
 APPROVED BY: NAME/DATE/TIME:

CTDOT
 STANDARD SHEET
 OFFICE OF ENGINEERING

STANDARD SHEET TITLE:
PEDESTRIAN PUSH BUTTONS

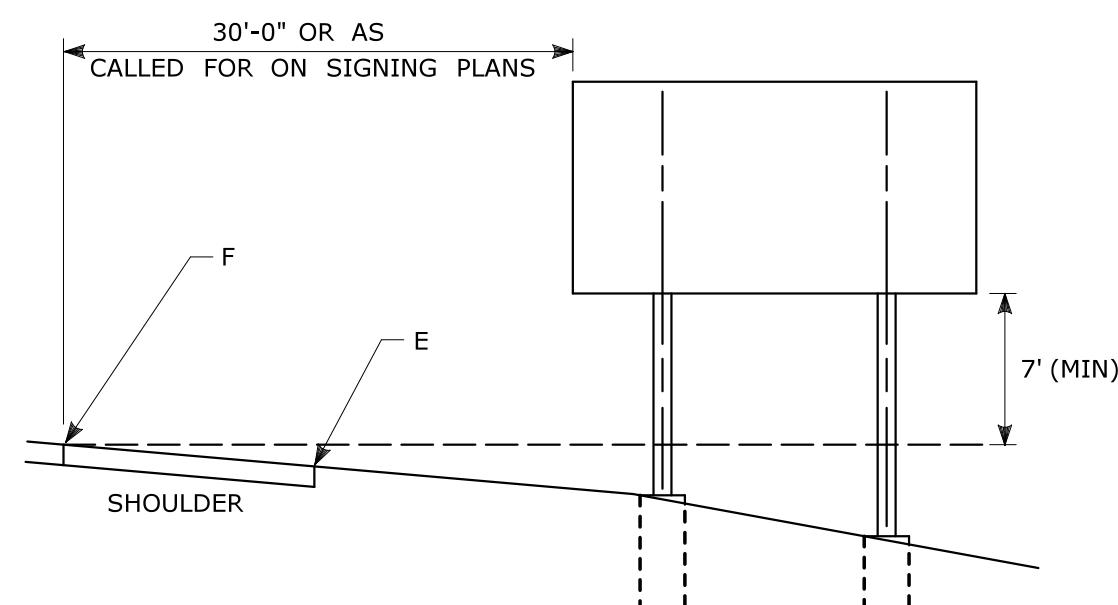
STANDARD SHEET NO.:
TR-1107_01



TYPICAL PLACEMENT OF OVERHEAD SIGNS ON SIGN SUPPORTS

NOTES:

- 1) FOR PLACEMENT OF CANTILEVER SIGN SUPPORT USE APPLICABLE PORTION OF ABOVE DETAIL.
- 2) BARRIER SYSTEMS MAY BE REQUIRED FOR BOTH SIDES OF SUPPORTS IN MEDIANS.
- 3) IMPACT PROTECTION SHALL BE PROVIDED FOR THE SIGN SUPPORTS LOCATED WITHIN CLEAR ZONE.
- 4) SIGN SUPPORT FOUNDATIONS SHALL BE LOCATED OUTSIDE OF BARRIER SYSTEMS DEFLECTION AREA.
- 5) ALL SIGNS ARE TO BE LEVEL, REGARDLESS OF CAMBER IN SUPPORT.



TYPICAL PLACEMENT OF SIDE MOUNTED SIGNS ON STRUCTURAL STEEL BREAKAWAY SIGN SUPPORTS

NOTES:

- 1) MIN. VERTICAL CLEARANCE ABOVE SIDEWALKS SHALL BE 7'.
- 2) WHERE GUIDE RAIL IS USED, THE OFFSET TO THE NEAR EDGE OF SIGN FACE SHALL BE AS SHOWN ELSEWHERE IN THE CONTRACT PLANS.
- 3) ON INTERSECTING ROADS AT RAMP TERMINI, THE OFFSET TO THE NEAR EDGE OF OF SIGN FACE SHALL BE 6' MIN. FROM POINT "E".
- 4) IF 30'-0" MIN. CANNOT BE MET, PLEASE CONTACT THE ENGINEER.

FOR MAXIMUM EFFECTIVENESS, POSITION SIDE MOUNTED SIGNS ON STRUCTURAL STEEL BREAKAWAY SIGN SUPPORTS AS FOLLOWS:

ON A TANGENT SECTION, POSITION THE SIGN SO THE VERTICAL AXIS IS PLUMB AND THE HORIZONTAL AXIS IS AT AN ANGLE OF 90° WITH THE TRAFFIC LANE WHICH THE SIGN SERVES. SIGNS LOCATED 30 FT OR MORE FROM THE EDGE OF THE ROAD SHALL BE TURNED APPROXIMATELY 3° TOWARD THE ROAD.

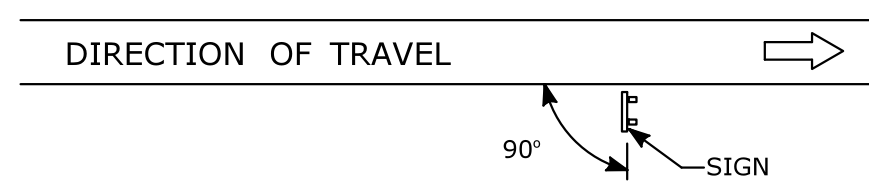


DIAGRAM "A"

ON A HORIZONTAL CURVE SECTION, POSITION THE SIGN SO THE VERTICAL AXIS IS PLUMB AND THE HORIZONTAL AXIS IS AT AN ANGLE OF 90° WITH A STRAIGHT LINE BETWEEN THE SIGN AND THE POINT AT WHICH THE SIGN SHALL BE READ.

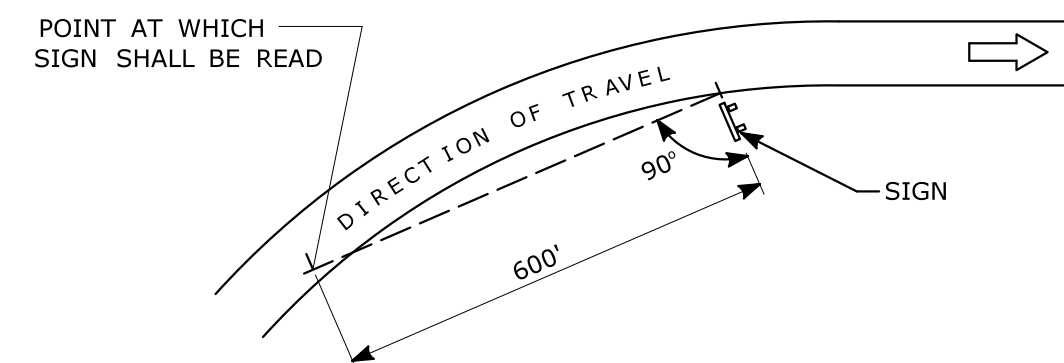
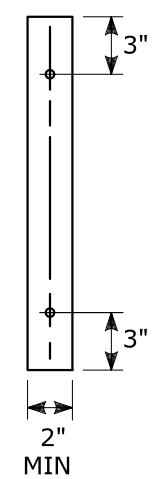


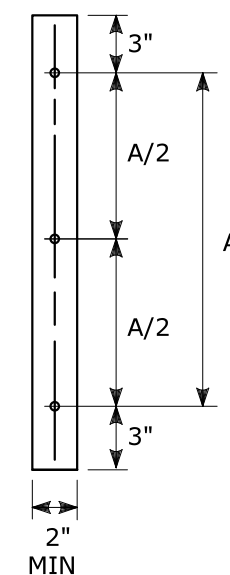
DIAGRAM "B"

SIGN ORIENTATION DETAILS FOR SIDE MOUNTED SIGNS ON STRUCTURAL STEEL BREAKAWAY SIGN SUPPORTS

RETROREFLECTIVE STRIPS 48" LONG OR LESS:



RETROREFLECTIVE STRIPS OVER 48" LONG:

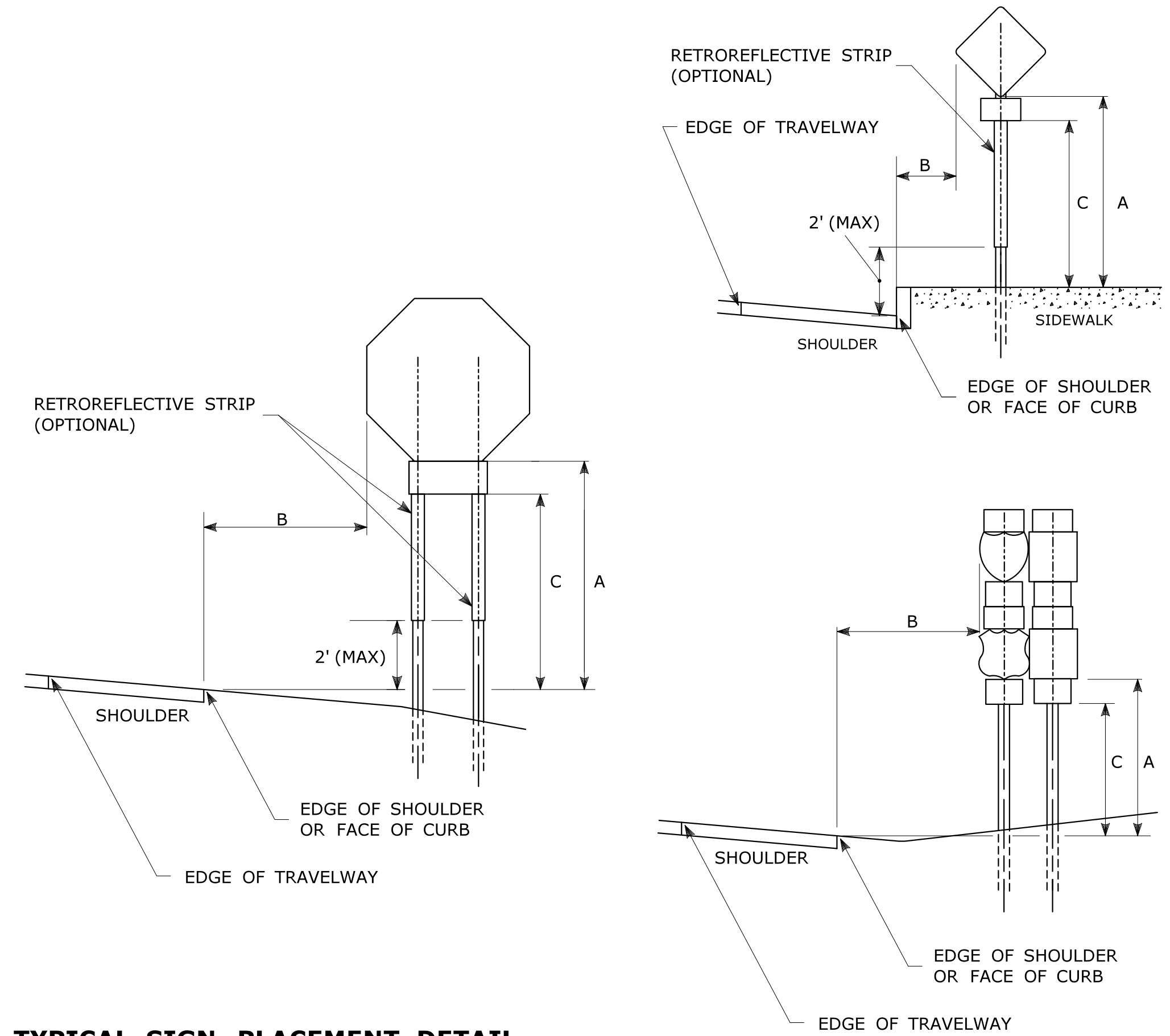


RETROREFLECTIVE STRIP DETAIL

NOTES:

RETROREFLECTIVE STRIPS WHICH ARE 48 IN LONG OR LESS SHALL BE ATTACHED USING 2 BOLTS AND RETROREFLECTIVE STRIPS OVER 48 IN LONG SHALL BE ATTACHED USING 3 BOLTS AS SHOWN ON THE DETAILS ABOVE. REFER TO STANDARD SHEET No. TR-1208.02 "METAL SIGN POSTS AND SIGN MOUNTING DETAILS" FOR MOUNTING DETAILS.

RETROREFLECTIVE STRIP COLOR SHALL MATCH THE BACKGROUND COLOR OF THE SIGN, EXCEPT THAT THE COLOR OF THE STRIP FOR "YIELD" AND "DO NOT ENTER" SIGNS SHALL BE RED.



TYPICAL SIGN PLACEMENT DETAIL

NOTES:

ALL SIGNS AND SHIELDS ON DIRECTIONAL ASSEMBLIES SHALL ABUT VERTICALLY. REFER TO STANDARD SHEET No. TR-1208.02 "METAL SIGN POSTS AND SIGN MOUNTING DETAILS" FOR SIGN POSTS AND SIGN MOUNTING. IF A RETROREFLECTIVE STRIP IS USED ON SIGN SUPPORT, IT SHALL BE PLACED FOR THE FULL LENGTH OF THE SUPPORT FROM THE BOTTOM OF THE SIGN TO WITHIN 2 FT ABOVE THE EDGE OF THE ROADWAY. PARKING SIGNS TYPICALLY USE 45° MOUNTING BRACKET.

DIM."A" MIN SIGN HEIGHT	DIM."B" MIN LATERAL OFFSET (1)	DIM."C" MIN PLAQUE HEIGHT (1)	ASSEMBLY LOCATION
7' (2)	6' 12' (3)	5'	SIGNS ON FREEWAYS AND EXPRESSWAYS EXCEPT CHEVRON ALIGNMENT SIGNS, ONE-DIRECTION LARGE ARROW SIGNS, DO NOT ENTER SIGNS, AND WRONG WAY SIGNS
5'	2'	4'	• SIGNS IN RURAL AREAS • DO NOT ENTER AND WRONG WAY SIGNS ALONG EXIT RAMP • DO NOT ENTER AND WRONG WAY SIGNS ON LIMITED ACCESS HIGHWAYS
5'	2'	N/A	• CHEVRON ALIGNMENT SIGNS LOCATED ON FREEWAYS, EXPRESSWAYS, RAMP, AND IN RURAL AREAS • ONE-DIRECTION LARGE ARROW SIGNS LOCATED ON FREEWAYS, EXPRESSWAYS, RAMP, AND IN RURAL AREAS
4'	6' 12' (3)	N/A	INCIDENT MANAGEMENT SIGNS AND MILE POST MARKER ASSEMBLIES LOCATED ON FREEWAYS AND EXPRESSWAYS
4'	2'	4'	CENTRAL ISLANDS OF ROUNDABOUTS
7'	2' (4)	6'	BUSINESS & RESIDENTIAL AREAS WHERE PARKING OR OTHER OBSTRUCTIONS LIMIT VISIBILITY
7'	2' (4)	7'	SIDEWALKS (5)

(1) OR AS DIRECTED BY THE ENGINEER

(2) 8 FT MINIMUM HEIGHT REQUIRED IF A SUPPLEMENTAL PLAQUE IS SUBMOUNTED BELOW THE MAJOR SIGN.

(3) 6 FT FROM EDGE OF SHOULDER, WHEN SHOULDER IS OVER 6 FT WIDE
12 FT FROM EDGE OF TRAVELWAY, WHEN SHOULDER IS LESS THAN 6 FT WIDE.

(4) A LATERAL OFFSET OF AT LEAST 1 FT FROM THE FACE OF THE CURB MAY BE USED WHERE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING UTILITY POLES ARE CLOSE TO THE CURB.

(5) A CLEAR PATH OF NOT LESS THAN 4 FT SHALL BE PROVIDED IN SIDEWALK AREAS.

REV.	DATE	REVISION DESCRIPTION
3	8-2018	INCLUDED INCIDENT MANAGEMENT AND MILE MARKER SIGNS.
2	4-2017	MINOR REVISIONS.
1	2-2011	MINOR REVISIONS.

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NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Plotted Date: 8/10/2018

Filename: TR_1208_01_1_2018.dgn Model: TR-1208_01

SUBMITTED BY: NAME/DATE/TIME:

APPROVED BY: NAME/DATE/TIME:

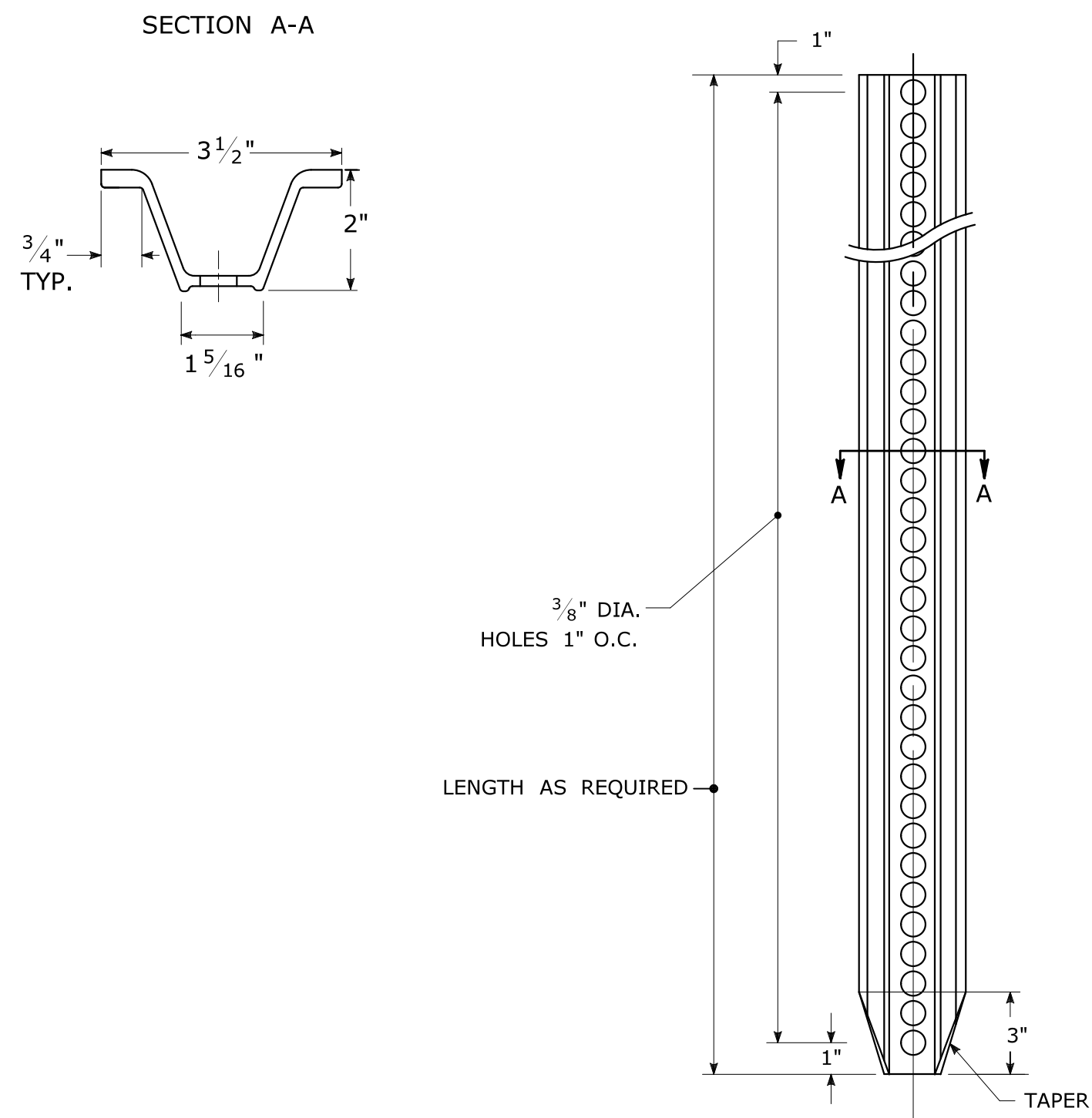
CTDOT
STANDARD SHEET

OFFICE OF ENGINEERING

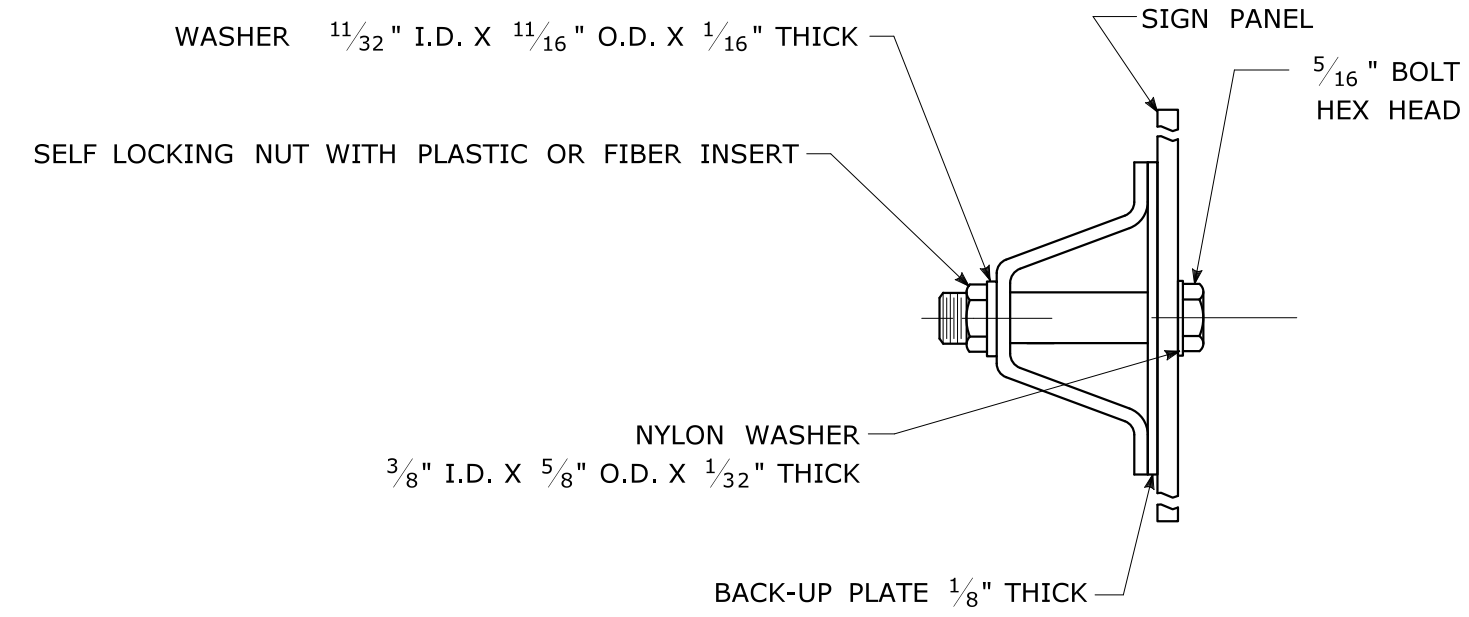
STANDARD SHEET TITLE:
SIGN PLACEMENT AND RETROREFLECTIVE STRIP DETAILS

STANDARD SHEET NO.:
TR-1208_01

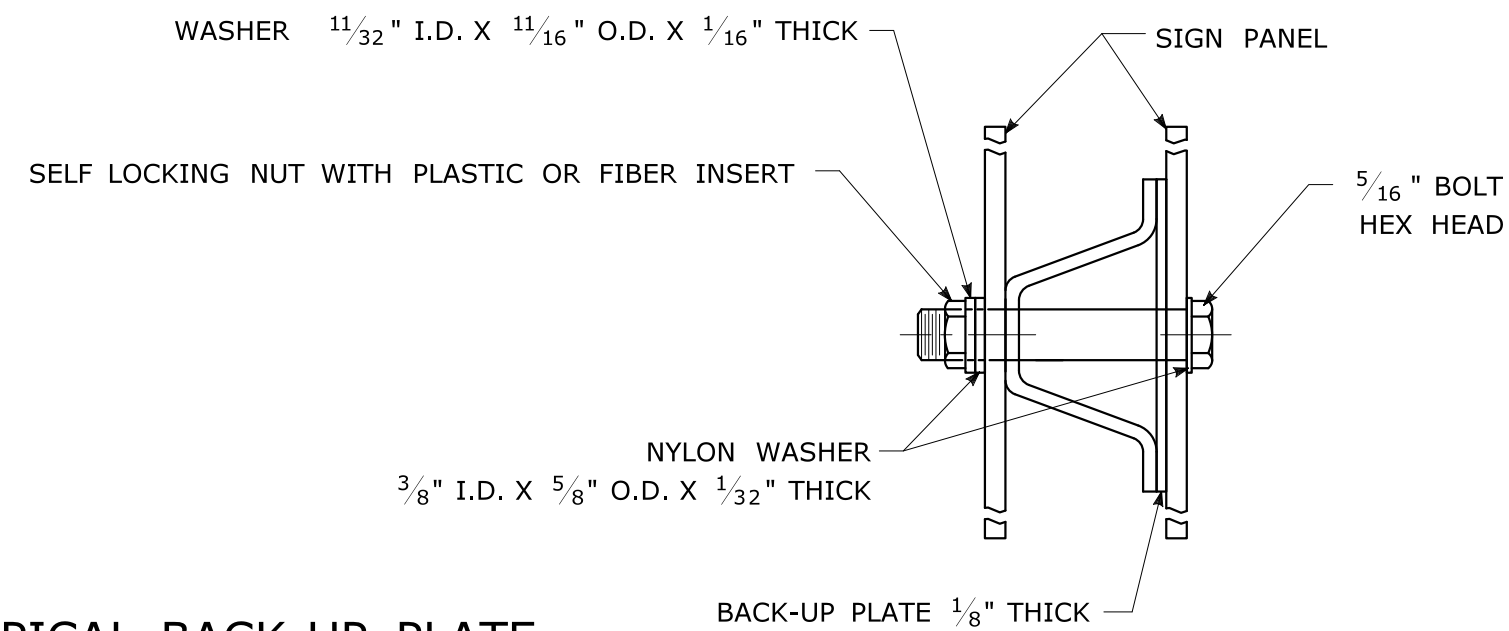
TYPICAL METAL SIGN POSTS



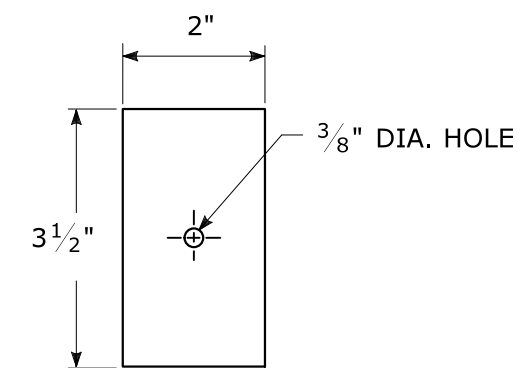
TYPICAL SIGN PANEL ATTACHMENT



TYPICAL BACK TO BACK SIGN PANEL ATTACHMENT



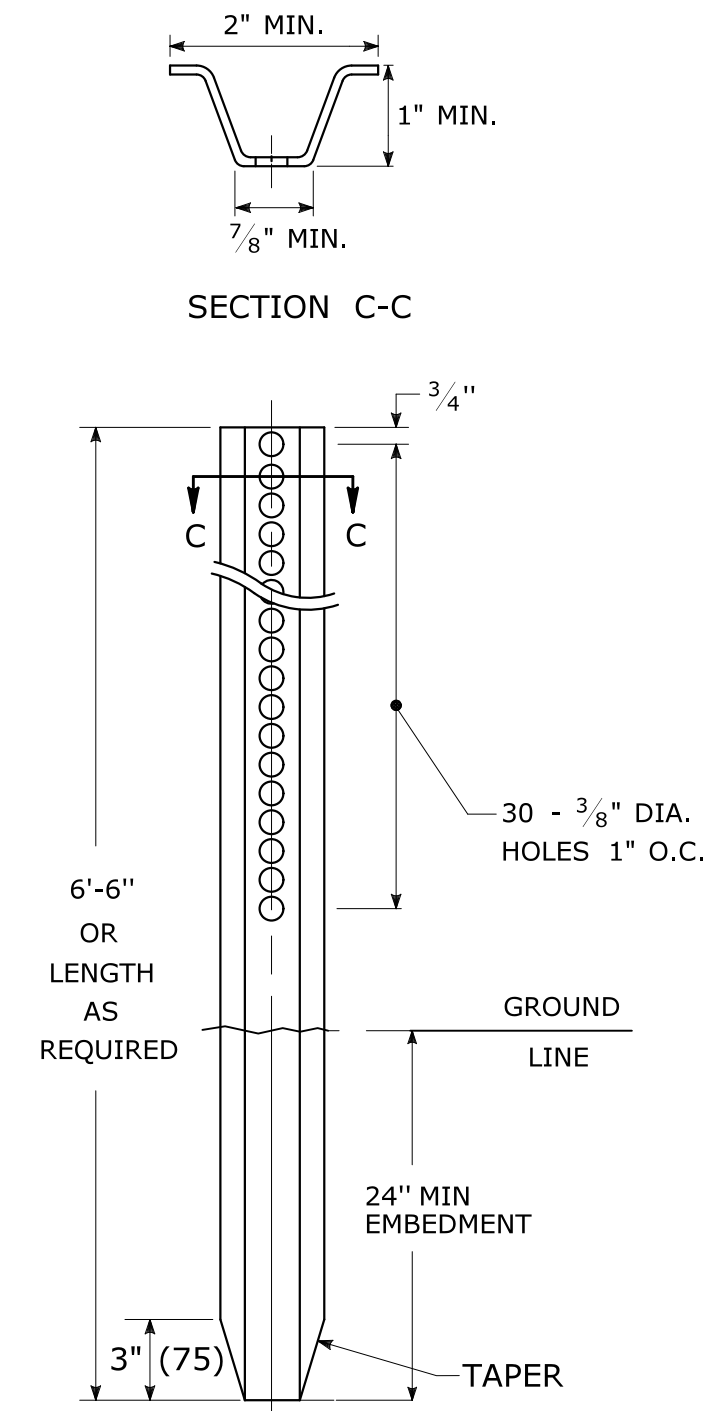
TYPICAL BACK-UP PLATE



BOLTS - STAINLESS STEEL CONFORMING TO ASTM F593, ALLOY GROUP 1 OR 2 (ALLOY TYPES 304 OR 316).
 SELF LOCKING NUTS - STAINLESS STEEL CONFORMING TO ASTM F594, ALLOY GROUP 1 OR 2 (ALLOY TYPES 304 OR 316).
 WASHERS - STAINLESS STEEL CONFORMING TO ASTM A240, (ALLOY TYPES 304 OR 316).

METAL DELINEATOR POST

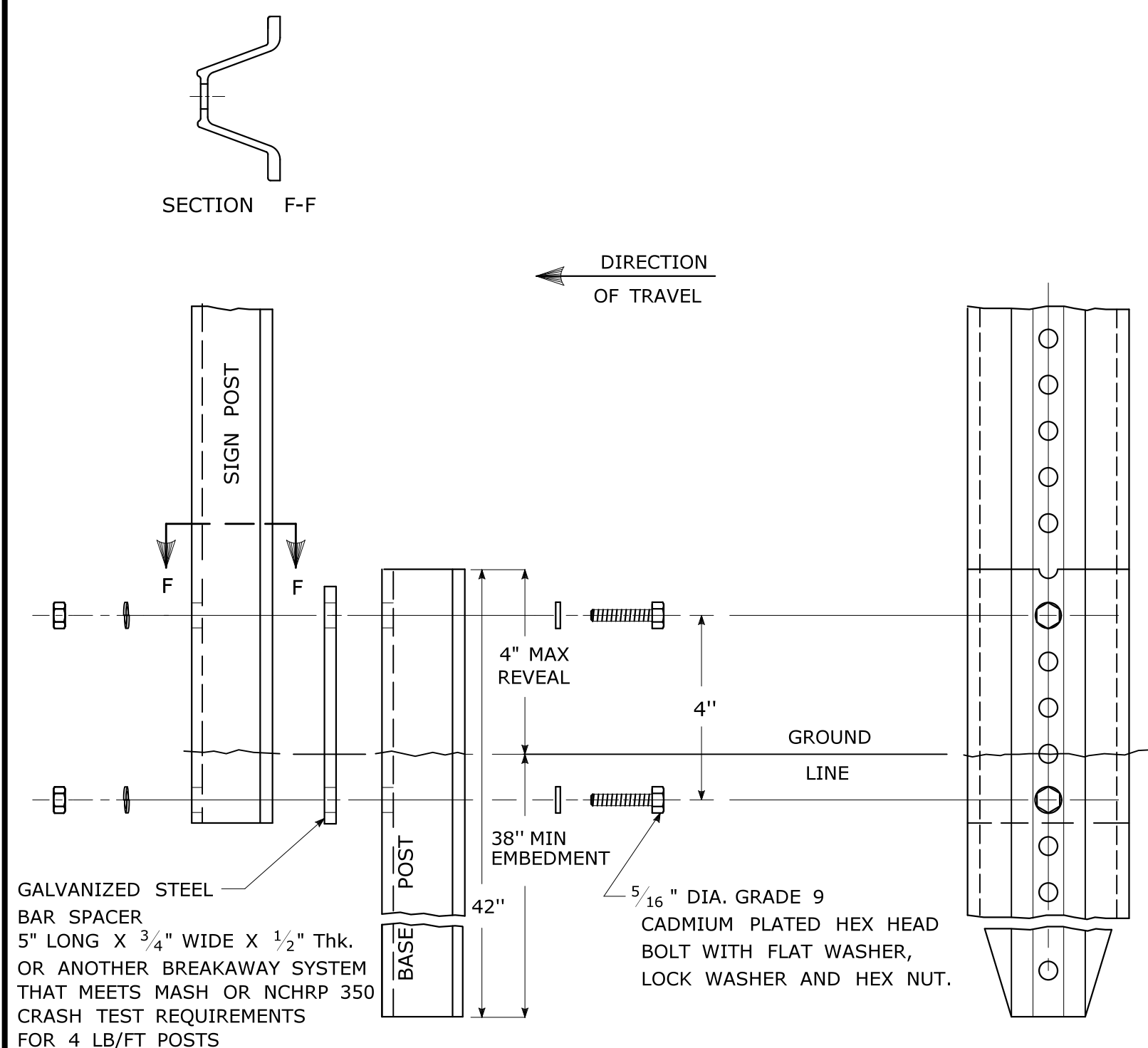
WT./FT. = 1.12 LBS./FT. MIN.



GENERAL NOTES:

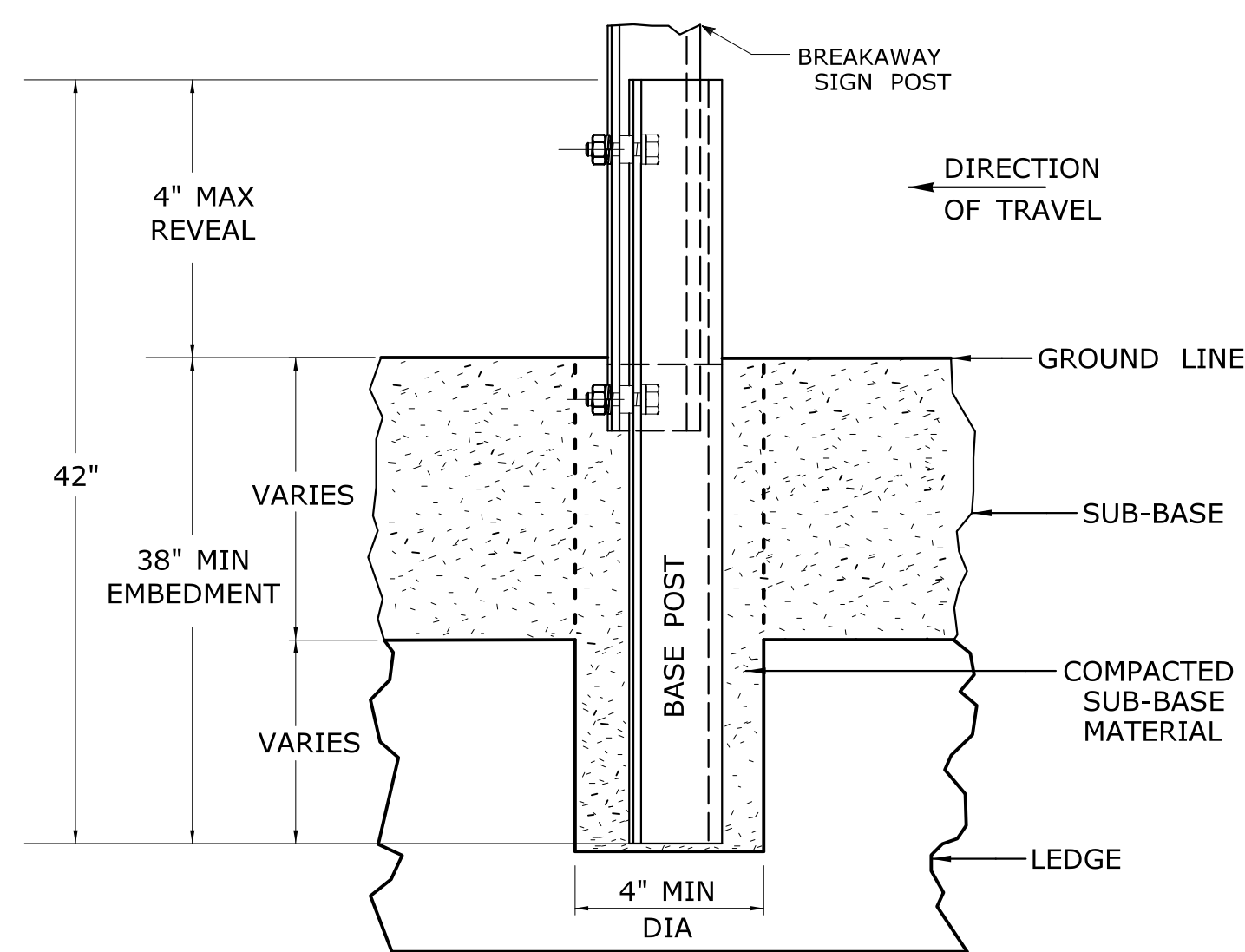
1. STEEL FOR DELINEATOR POSTS SHALL BE ASTM A36 STEEL. STEEL FOR ALL OTHER POSTS SHALL CONFORM TO THE MECHANICAL REQUIREMENTS OF ASTM A 499 GRADE 80 AND TO THE CHEMICAL REQUIREMENTS OF ASTM A1 CARBON STEEL TEE RAIL HAVING NOMINAL WEIGHT (MASS) OF 91 LBS. OR GREATER PER LINEAR YARD.
2. AFTER FABRICATION, ALL STEEL POSTS, STRAPS AND PLATES SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A123.
3. WASHERS FOR BREAKAWAY INSTALLATIONS SHALL MEET ASTM F436, TYPE 1.
4. SPACER BAR FOR BREAKAWAY INSTALLATION SHALL CONFORM TO THE MECHANICAL REQUIREMENTS OF ASTM A36.
5. ALL BOLTS, NUTS, AND WASHERS FOR BREAKAWAY INSTALLATIONS SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A153.
6. ALL SIGN POSTS SHALL HAVE BREAKAWAY FEATURES THAT MEET AASHTO REQUIREMENTS CONTAINED IN THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS." THE BREAKAWAY FEATURES SHALL BE STRUCTURALLY ADEQUATE TO CARRY THE SIGNS SHOWN IN THE PLANS AT 60 MPH WIND LOADINGS. INSTALLATIONS SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
7. SIGN POSTS SHALL BE 4 LBS./FT.

BREAKAWAY INSTALLATION FOR 4 LBS./FT. POSTS

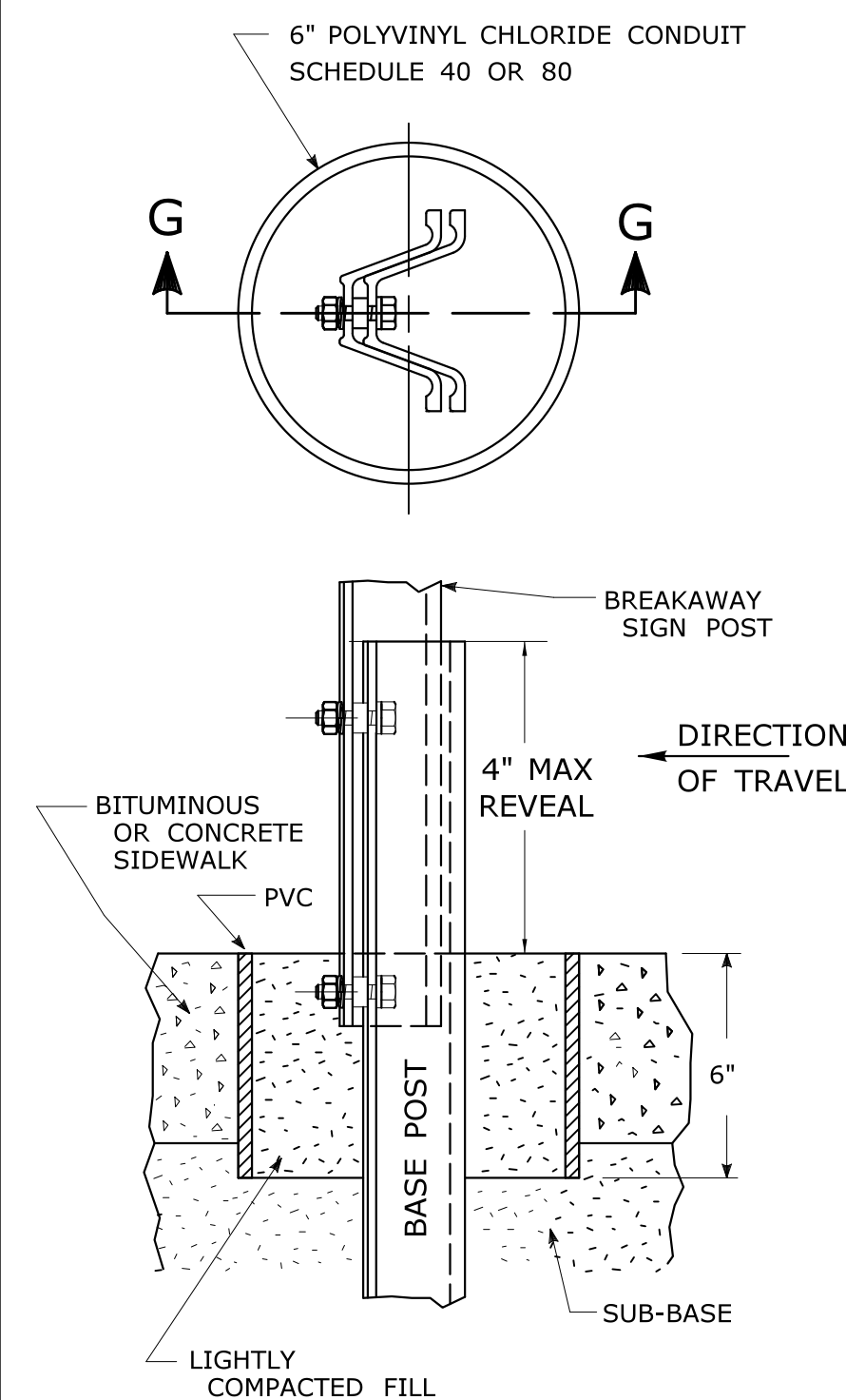


TYPICAL SIGN POST INSTALLATION IN LEDGE

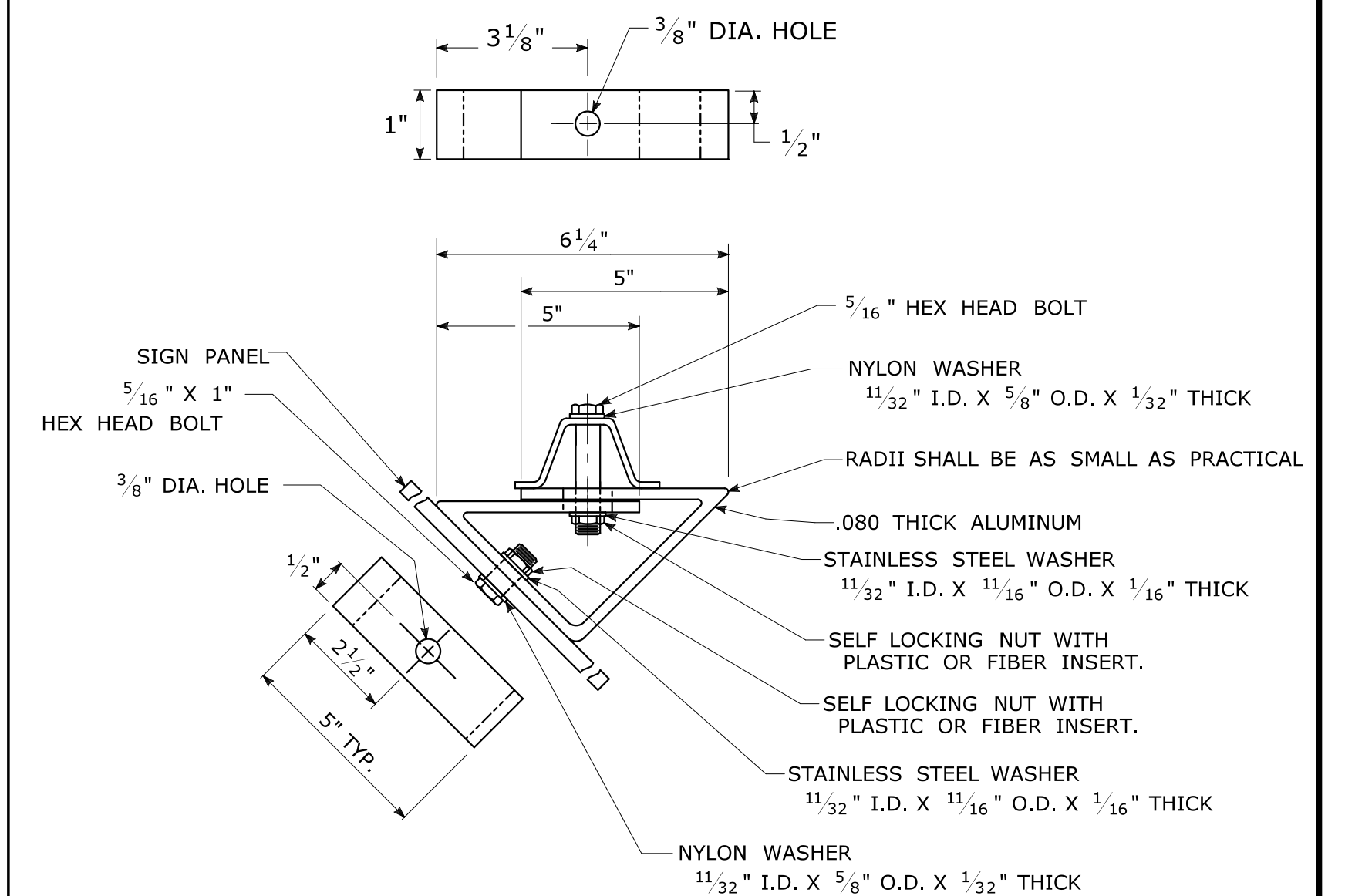
LEDGE SHALL BE REMOVED TO DRIVE THE BASE POST TO A DEPTH OF 38".
 HOLE SHALL BE FILLED WITH SUB-BASE MATERIAL AND COMPACTED WITH A TAMPING BAR, OR TECHNIQUE APPROVED BY THE ENGINEER, PRIOR TO BASE POST INSTALLATION.



TYPICAL SLEEVE FOR PAVED AREAS



45° MOUNTING BRACKET FOR INSTALLATION OF PARKING SIGNS



REV.	DATE	REVISION DESCRIPTION
2	6-2017	SIGN POST REVISIONS.
1	2-2011	MINOR REVISIONS.

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Plotted Date: 6/6/2017

NOT TO SCALE



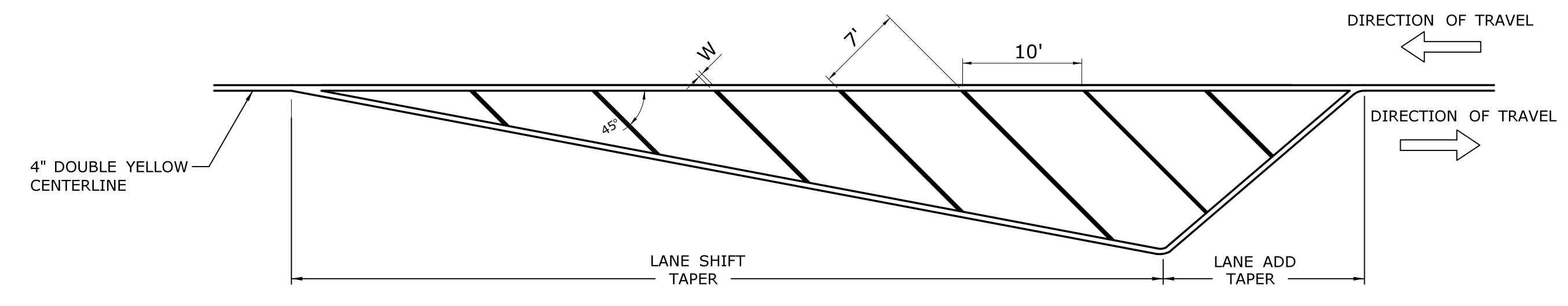
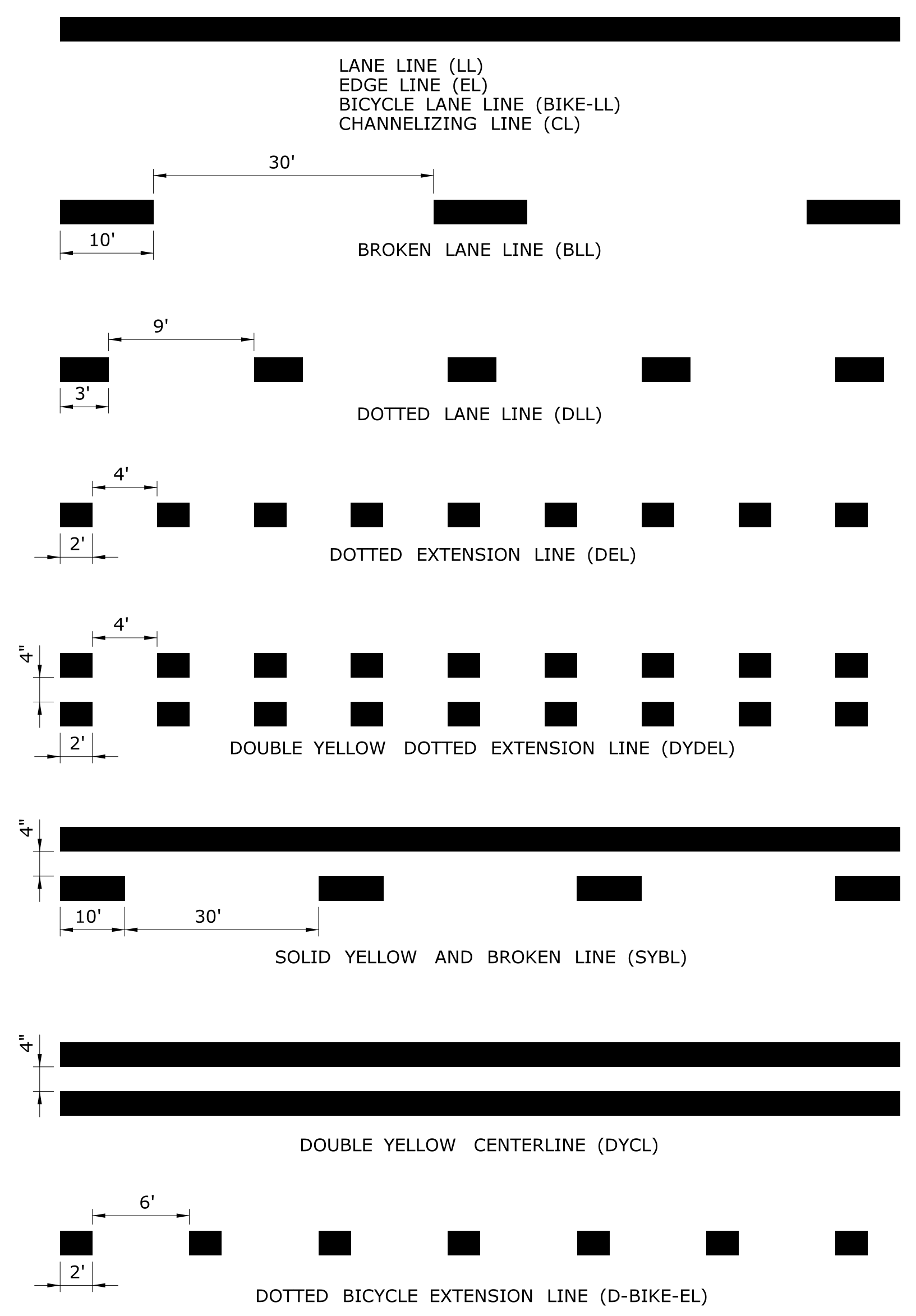
STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION

SUBMITTED BY:	NAME/DATE/TIME:
APPROVED BY:	NAME/DATE/TIME:

CTDOT STANDARD SHEET
 OFFICE OF ENGINEERING

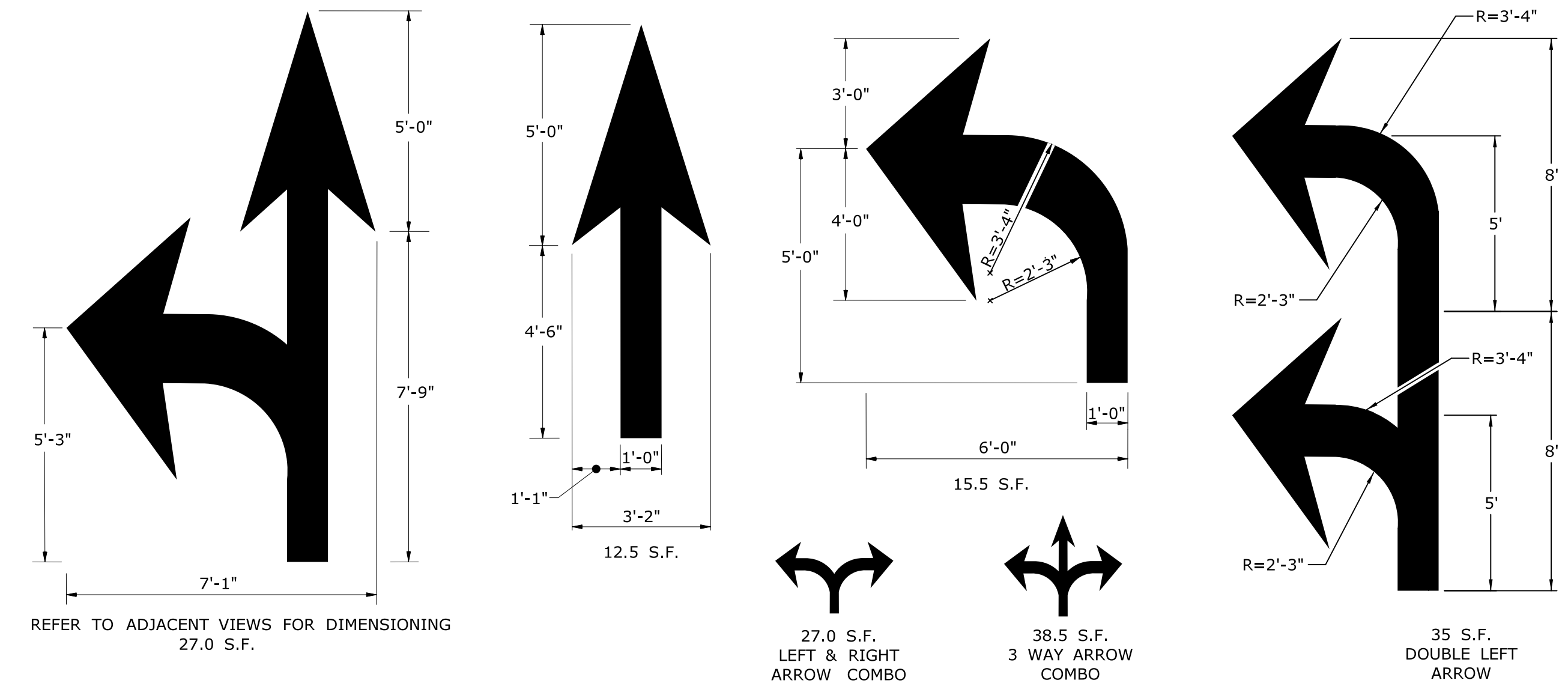
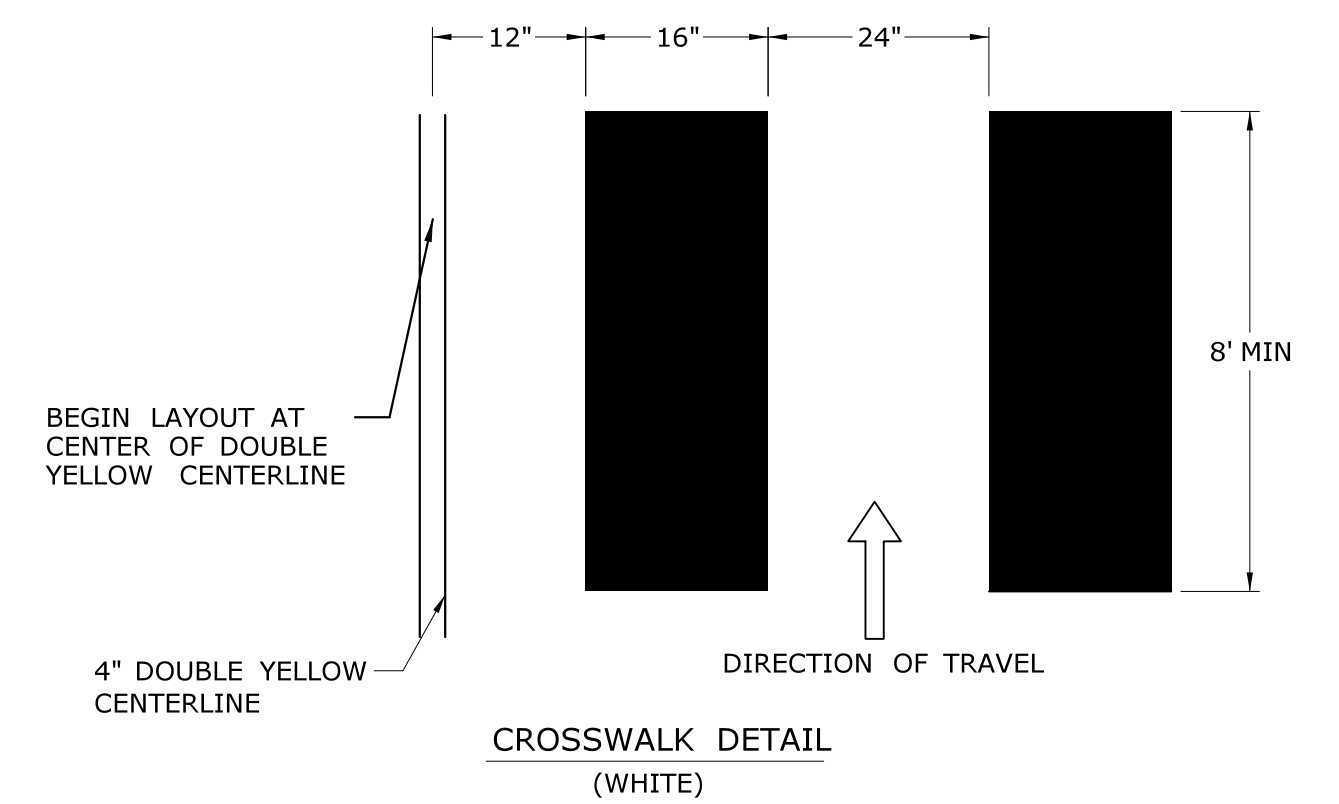
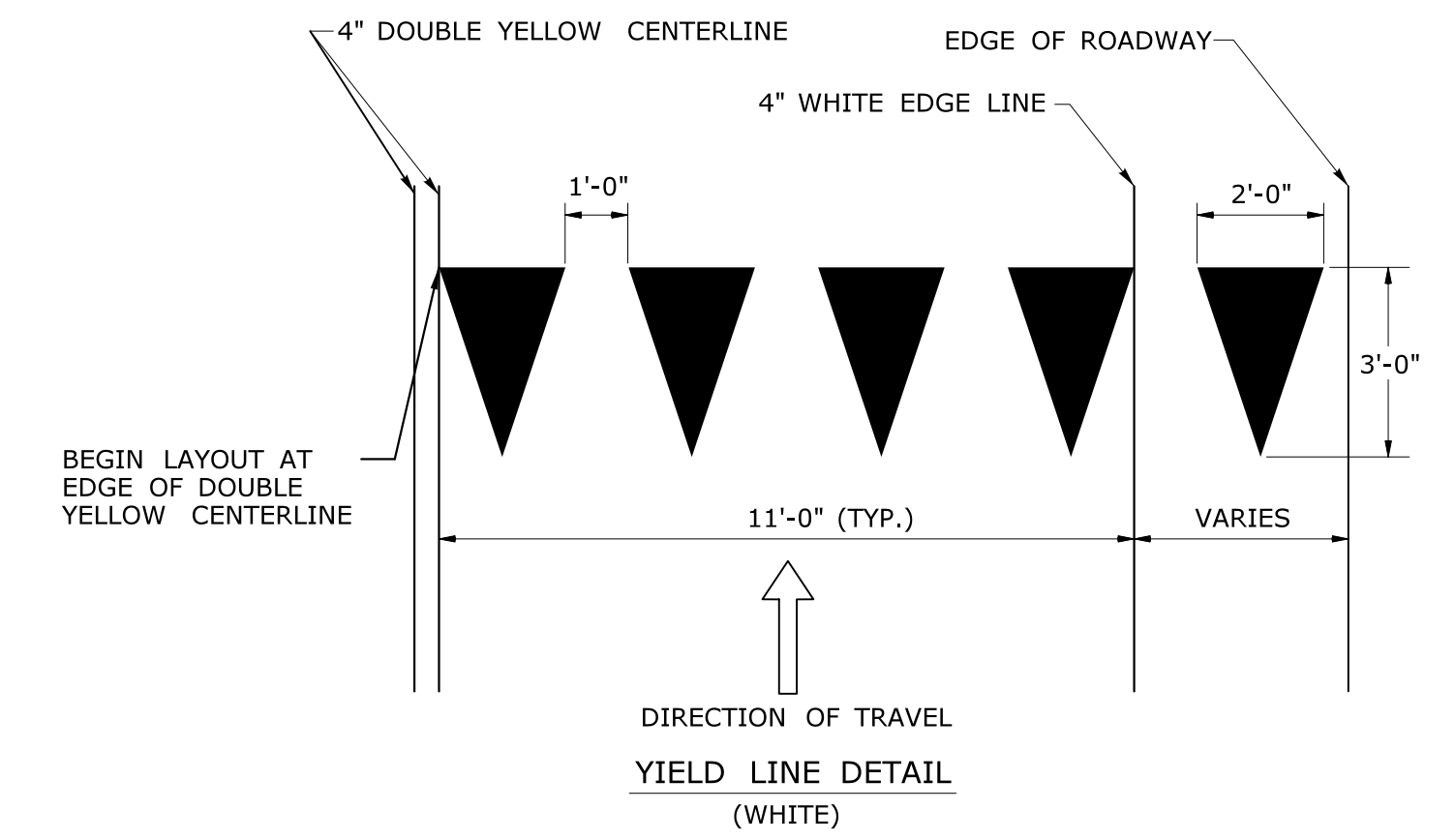
STANDARD SHEET TITLE:
METAL SIGN POSTS AND SIGN MOUNTING DETAILS

GUIDE SHEET NO.:
TR-1208_02



CROSS HATCHED ISLAND DETAIL
(YELLOW)

W IS TO BE 6" WHEN POSTED SPEED ≤ 45 MPH
W IS TO BE 12" WHEN POSTED SPEED > 45 MPH
CROSS HATCHED ISLANDS ARE TO BE INSTALLED WHERE CALLED FOR ON THE PLANS

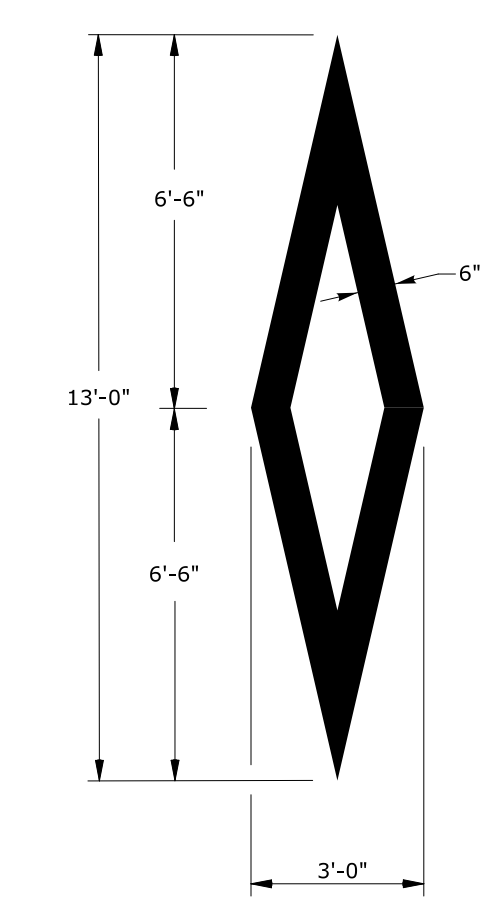


PAVEMENT ARROW DETAILS
(WHITE)

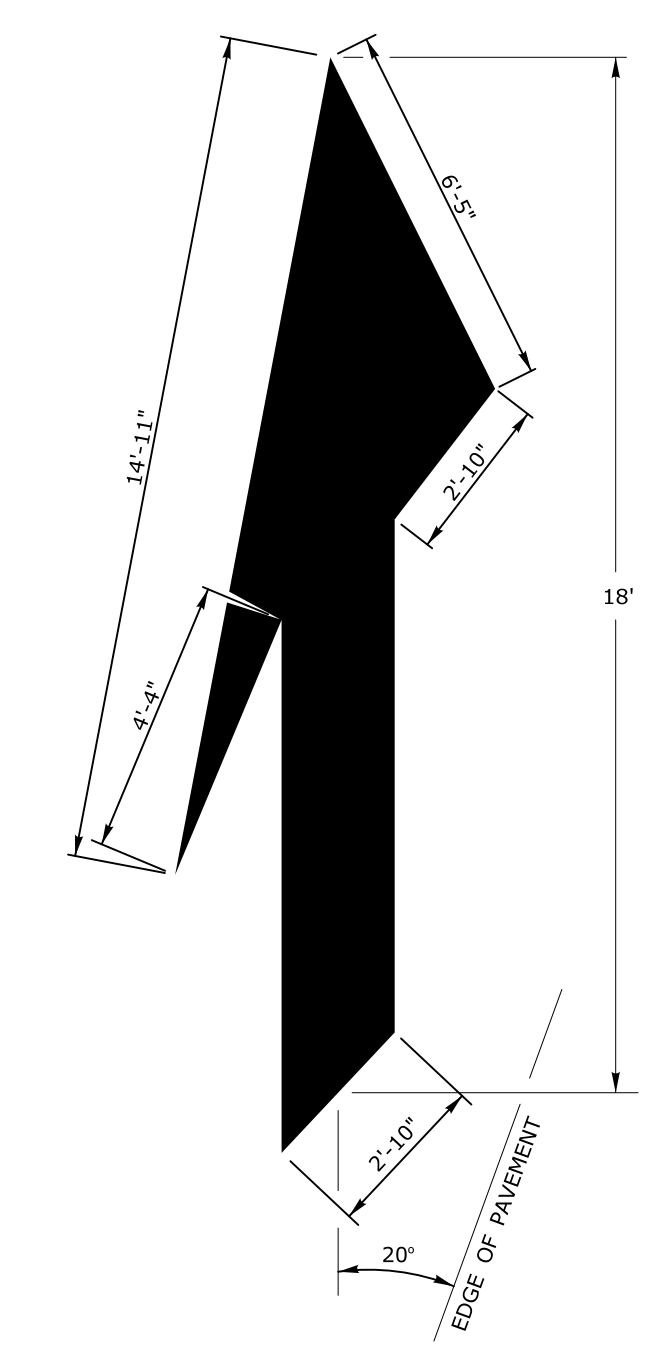
ARROWS SHALL BE CENTERED IN TRAVEL LANE

NOTES :

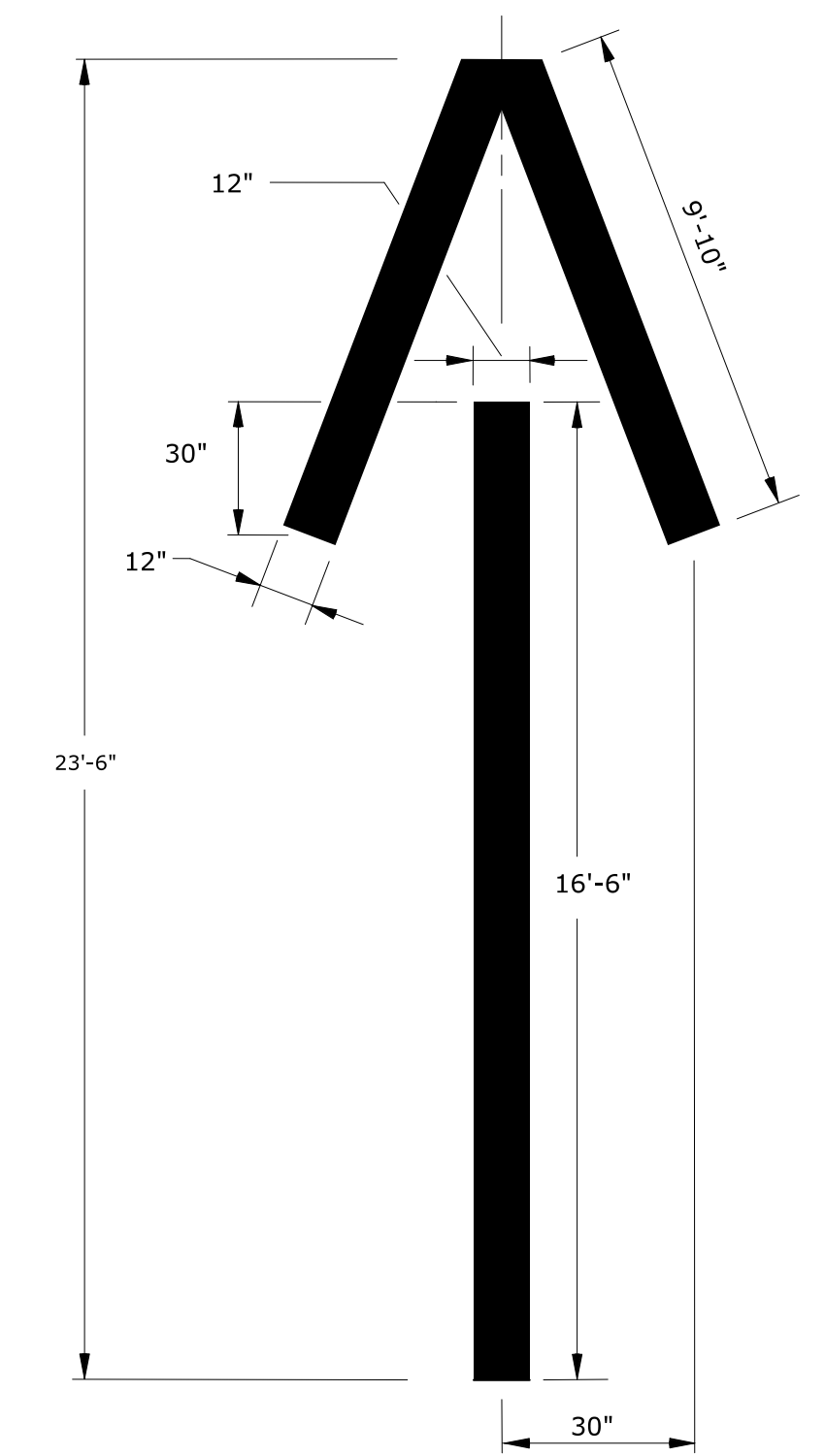
1. AREA OF PAVEMENT MARKINGS AS INDICATED IS APPROXIMATE.
2. RIGHT TURN PAVEMENT MARKING ARROWS ARE MIRROR IMAGE OF LEFT TURN PAVEMENT MARKING ARROWS.



WHITE PREFERENTIAL LANE SYMBOL
13.0 S.F.



WHITE LANE REDUCTION ARROW
41.8 S.F.



WHITE WRONG WAY PAVEMENT ARROW
36.2 S.F.

REV.	DATE	REVISION DESCRIPTION
1	8-2018	REMOVED ROUNDABOUT MARKINGS.

Plotted Date: 8/10/2018

NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

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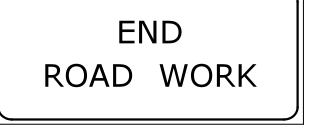
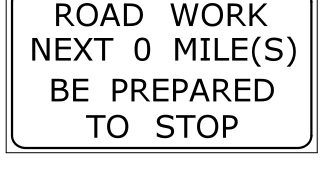




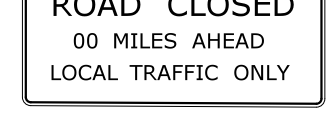
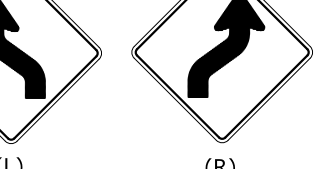
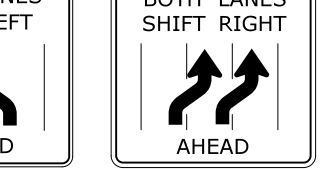


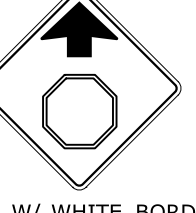
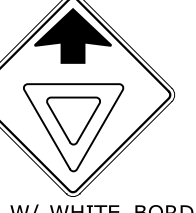
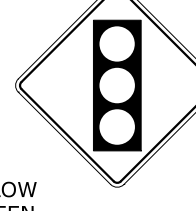

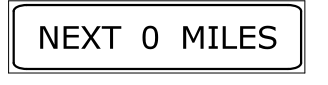




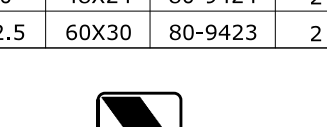



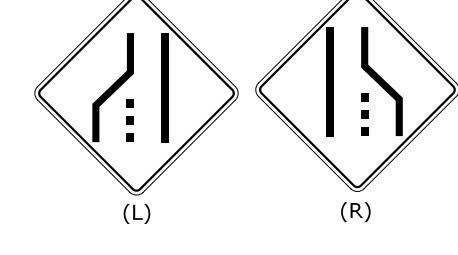

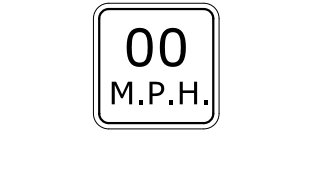






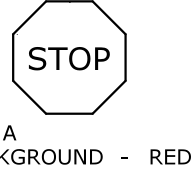
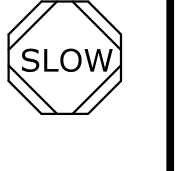
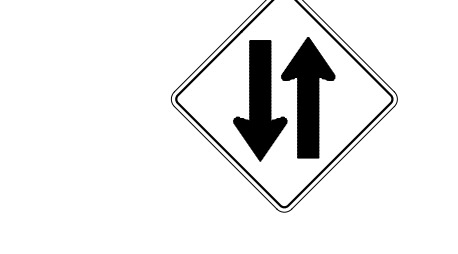



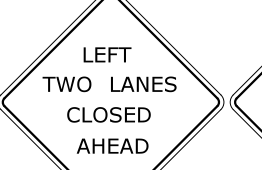





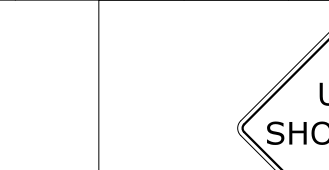







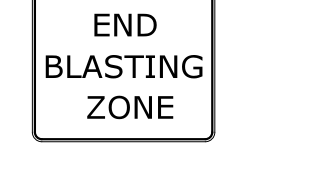
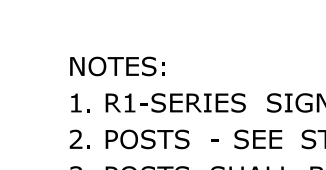
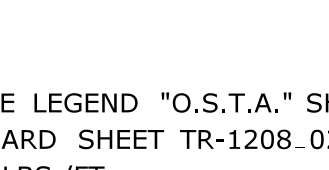
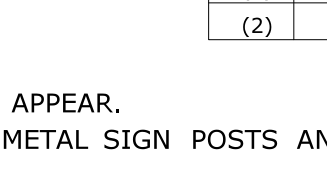





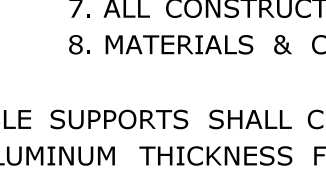
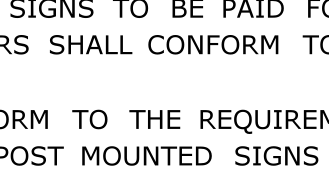
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APPROVED BY: NAME/DATE/TIME:

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STANDARD SHEET
OFFICE OF ENGINEERING

STANDARD SHEET TITLE:
PAVEMENT MARKING LINES AND SYMBOLS

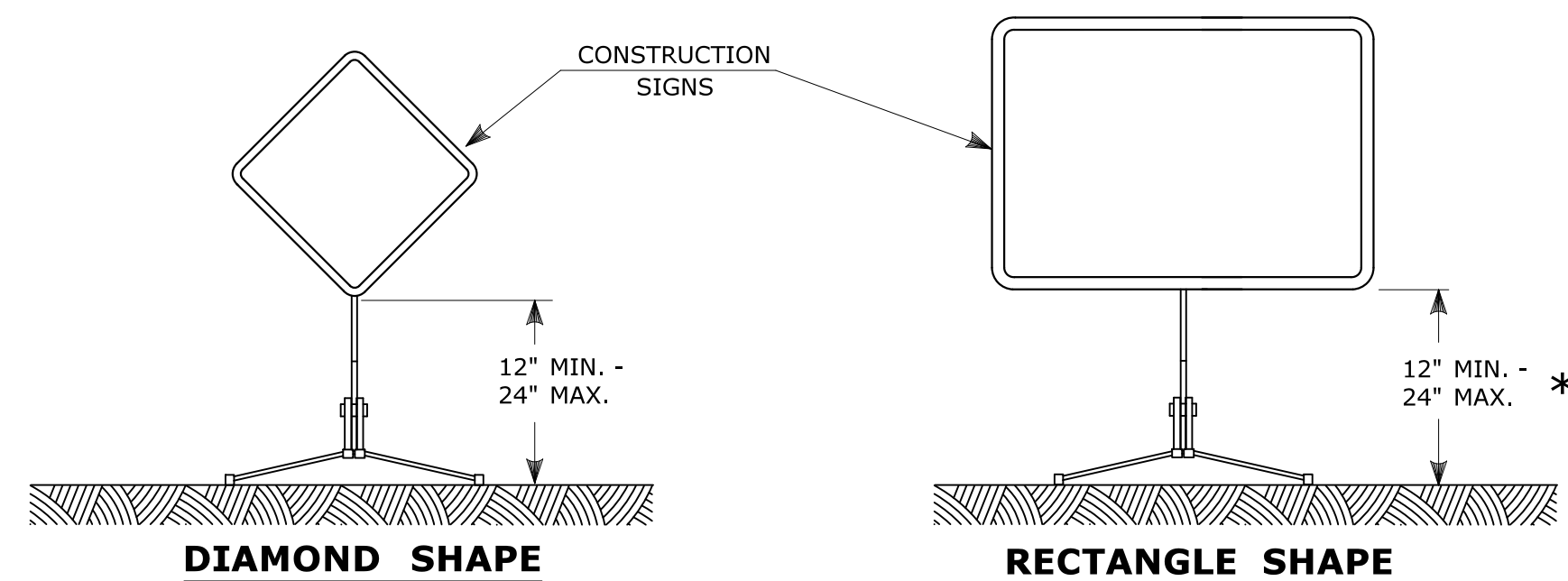
STANDARD SHEET NO.:
TR-1210_04

E5 - SERIES  COPY & BORDER - WHITE BACKGROUND - GREEN				G20 - SERIES   VARIABLE MILEAGE				M4 - SERIES   VARIABLE ARROW				R1 - SERIES  COPY & BORDER - WHITE BACKGROUND - RED				R9 & R11 - SERIES   COPY & BORDER - BLACK BACKGROUND - WHITE VARIABLE MILEAGE COPY & BORDER - BLACK BACKGROUND - WHITE				W1 - SERIES     COPY & BORDER - BLACK BACKGROUND - WHITE VARIABLE MILEAGE COPY & BORDER - BLACK BACKGROUND - WHITE				W3 - SERIES   			
16 - SERIES  GENERAL STATUTES SEC 13a-115, 13a-145 COMMISSIONER OF TRANSPORTATION				 VARIABLE MILEAGE				R4 - SERIES   COPY & BORDER - BLACK BACKGROUND - WHITE VARIABLE ARROW				  COPY & BORDER - BLACK BACKGROUND - WHITE VARIABLE ARROW COPY & BORDER - BLACK BACKGROUND - WHITE				    COPY & BORDER - BLACK BACKGROUND - WHITE VARIABLE MILEAGE COPY & BORDER - BLACK BACKGROUND - WHITE											
W4-W6 - SERIES 				W8-W9 - SERIES 				W13 - SERIES 				W20 - SERIES    				W21 - SERIES 				W22 - SERIES 				STOP-SLOW PADDLE   SIDE A BACKGROUND - RED COPY & BORDER - WHITE SIDE B BACKGROUND - ORANGE COPY & BORDER - BLACK PLAIN			
												   								  							
								   								   											
W16 - SERIES 				  VARIABLE MILEAGE				  COPY & BORDER - BLACK BACKGROUND - ORANGE VARIABLE MILEAGE				  COPY & BORDER - BLACK BACKGROUND - WHITE VARIABLE MILEAGE															

- NOTES:
- R1-SERIES SIGN THE LEGEND "O.S.T.A." SHALL APPEAR.
 - POSTS - SEE STANDARD SHEET TR-1208.02 - "METAL SIGN POSTS AND SIGN MOUNTING DETAILS".
 - POSTS SHALL BE 4 LBS./FT.
 - ALL POSTS NOTED ARE FOR LONG TERM INSTALLATION. SEE STANDARD SHEET TR-1208.02.
 - FOR TEMPORARY SUPPORTS SEE STANDARD SHEET TR-1220.02 - "CONSTRUCTION SIGN SUPPORTS AND CHANNELIZING DEVICES".
 - FOR SPECIFIC SIGN DESIGN, CONTACT CONN. D.O.T., DIVISION OF TRAFFIC ENGINEERING. FOR BOLT HOLE PATTERN REFER TO FHWA PUBLICATION "STANDARD HIGHWAY SIGNS". SIGNS OF DIFFERENT DIMENSIONS TO BE ERRECTED ON THE SAME POSTS, OR SPAN/MAST ARM MOUNTED, MAY REQUIRE SPECIAL BOLT HOLE PATTERNS.
 - ALL CONSTRUCTION SIGNS TO BE PAID FOR UNDER THE CONSTRUCTION SIGNS ITEM IN THE CONTRACT.
 - MATERIALS & COLORS SHALL CONFORM TO STATE SPECIFICATIONS.

MATERIALS:
 SIGNS AND THEIR PORTABLE SUPPORTS SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 2 DEVICES. ALUMINUM THICKNESS FOR POST MOUNTED SIGNS SHALL BE .100" EXCEPT SIGN #s. 80-1605, 80-9914, 80-9815, 80-9728, 80-9519, & 51-6147 (L OR R) WHICH SHALL BE .125", PLYWOOD THICKNESS FOR POST MOUNTED SIGNS SHALL BE 1/2" EXTERIOR GRADE A-C OR BETTER. SIGN BLANKS SHALL HAVE ONE COAT OF PRIMER PAINT PRIOR TO APPLICATION OF RETROREFLECTIVE SHEETING & COPY.

COLORS:
 BACKGROUND - FLUORESCENT ORANGE - EXCEPT AS NOTED.
 LEGEND - BLACK - EXCEPT AS NOTED.
 ALL SIGNS WITH FLUORESCENT ORANGE BACKGROUND TO USE TYPE VIII RETROREFLECTIVE SHEETING.
 ALL OTHER SIGNS TO USE TYPE IX RETROREFLECTIVE SHEETING.

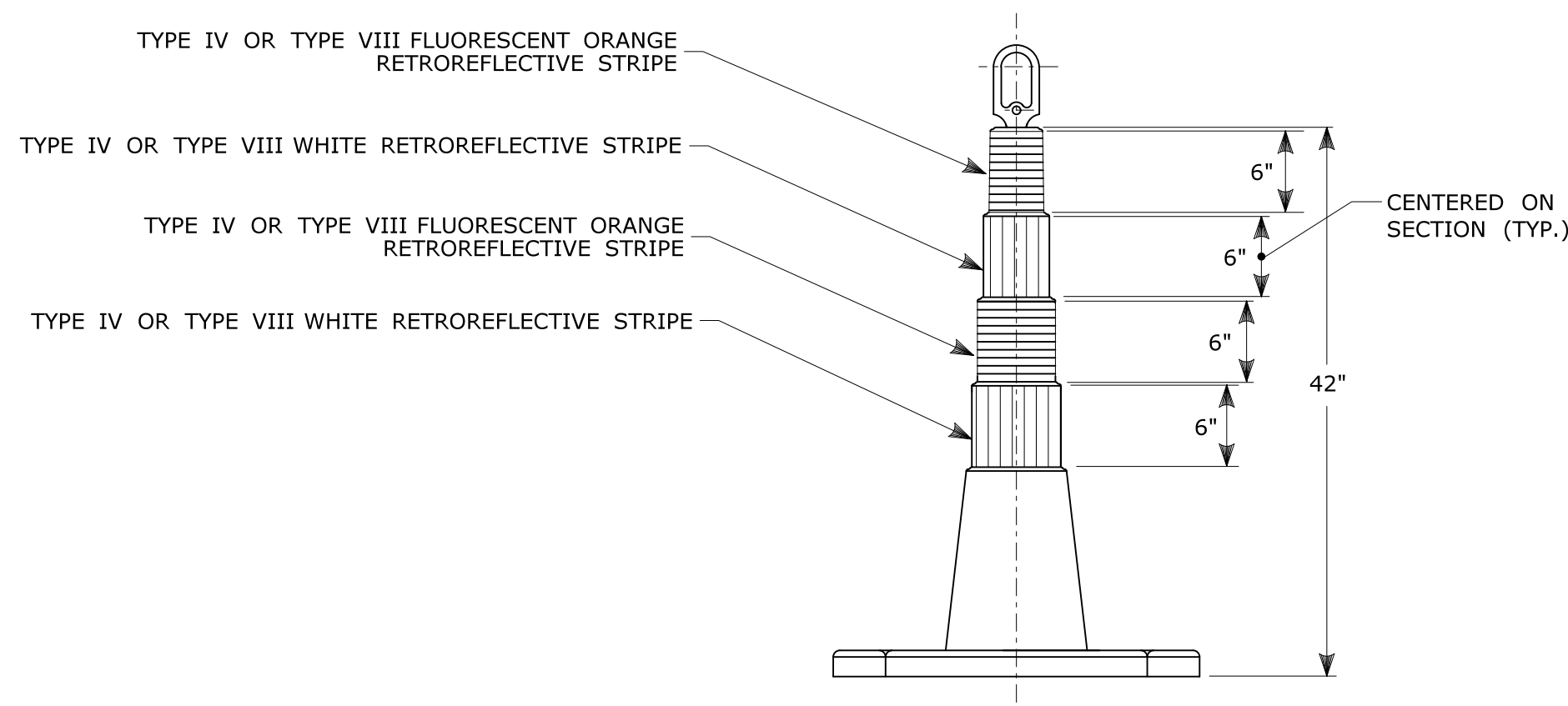


PORTABLE CONSTRUCTION SIGNS

NOTES FOR PORTABLE SIGN SUPPORTS:

- SIGNS AND THEIR PORTABLE SUPPORTS SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 2 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- MOUNTING HEIGHT OF SIGNS SHALL BE A MINIMUM OF 12" AND A MAXIMUM OF 24". SIGNS SHALL BE MOUNTED HIGHER AS NEEDED TO MEET FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY SUPPORT DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- PORTABLE SIGN SUPPORTS SHALL BE STABILIZED IN A MANNER THAT WILL NOT AFFECT THEIR COMPLIANCE WITH NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 2 DEVICES.
- PORTABLE CONSTRUCTION SIGN SUPPORTS SHOULD NOT BE USED FOR DURATION OF MORE THAN 3 DAYS EXCEPT FOR R9-8 THROUGH R9-11a SERIES, R11 SERIES, W1-6 THROUGH W1-8 SERIES, M4-10, AND E5-1. SEE STANDARD SHEET TR-1220.01 - "SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS" FOR SIGN DETAILS.

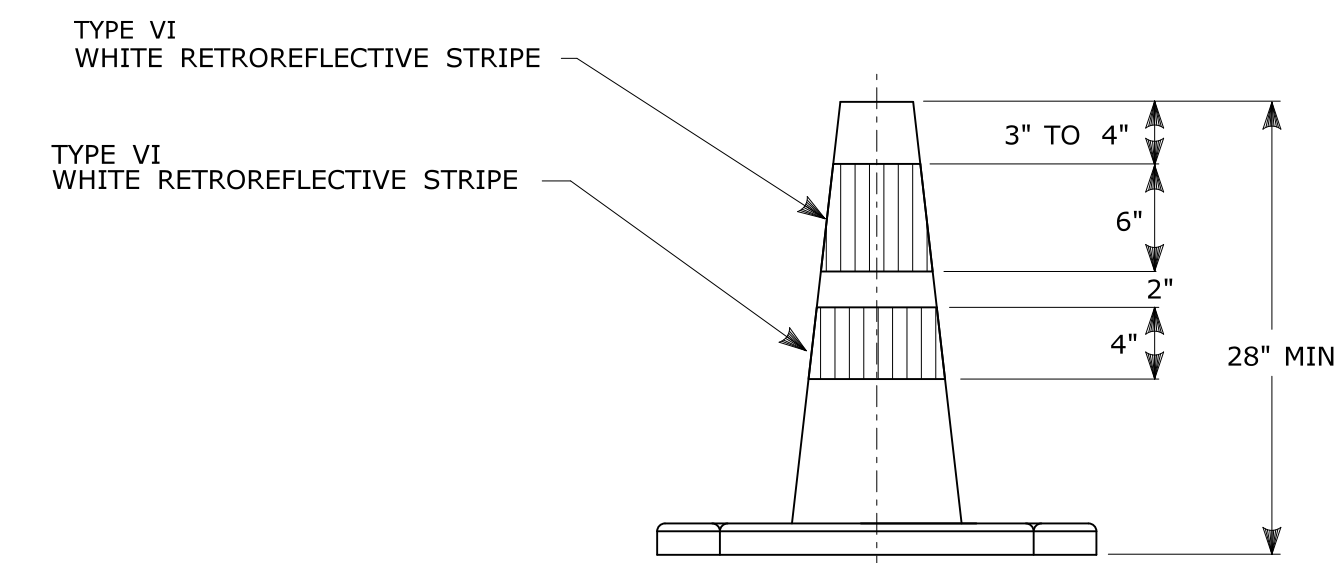
* FOR E5-1 (EXIT SIGNS) USE MIN 48".



42" TRAFFIC CONE

NOTES:

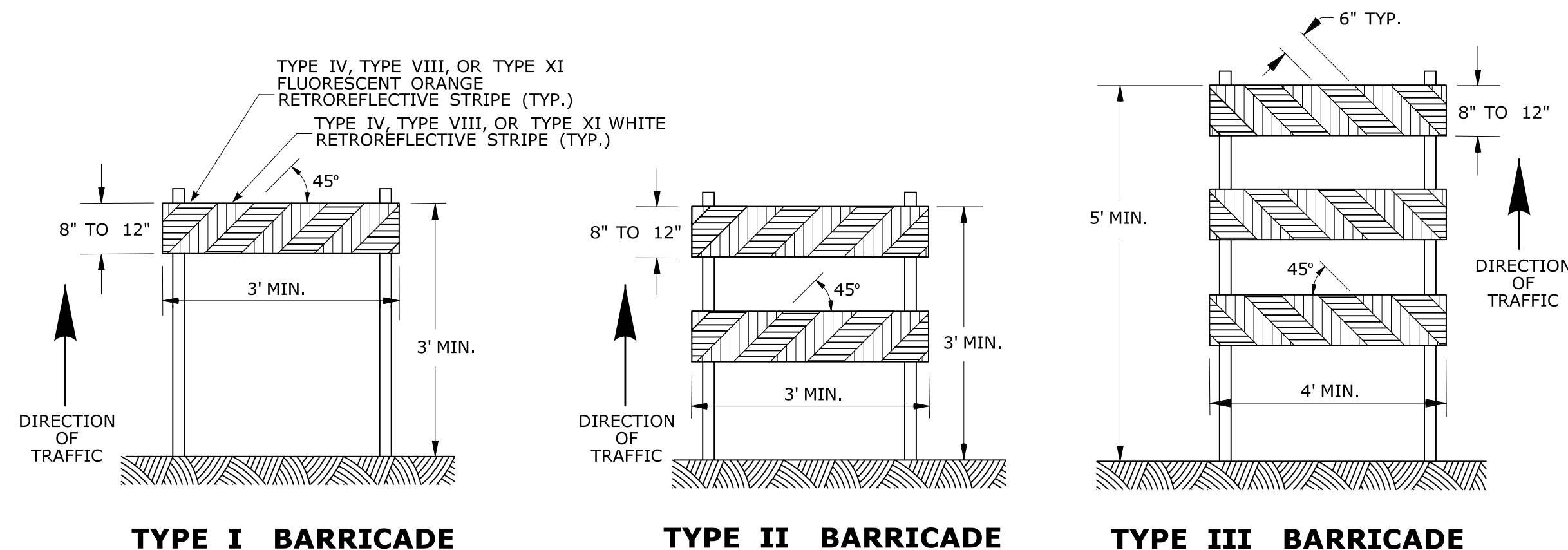
- TRAFFIC CONES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- IF RUBBER CONES ARE USED, THEY SHALL HAVE INTERIOR RIBS FOR RIGIDITY.
- IF PLASTIC CONES ARE USED, THEY SHALL BE COLOR IMPREGNATED.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY CONE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- THE ENTIRE AREA OF FLUORESCENT ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.
- THE SECTIONS OF CONES NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.



TRAFFIC CONE

NOTES:

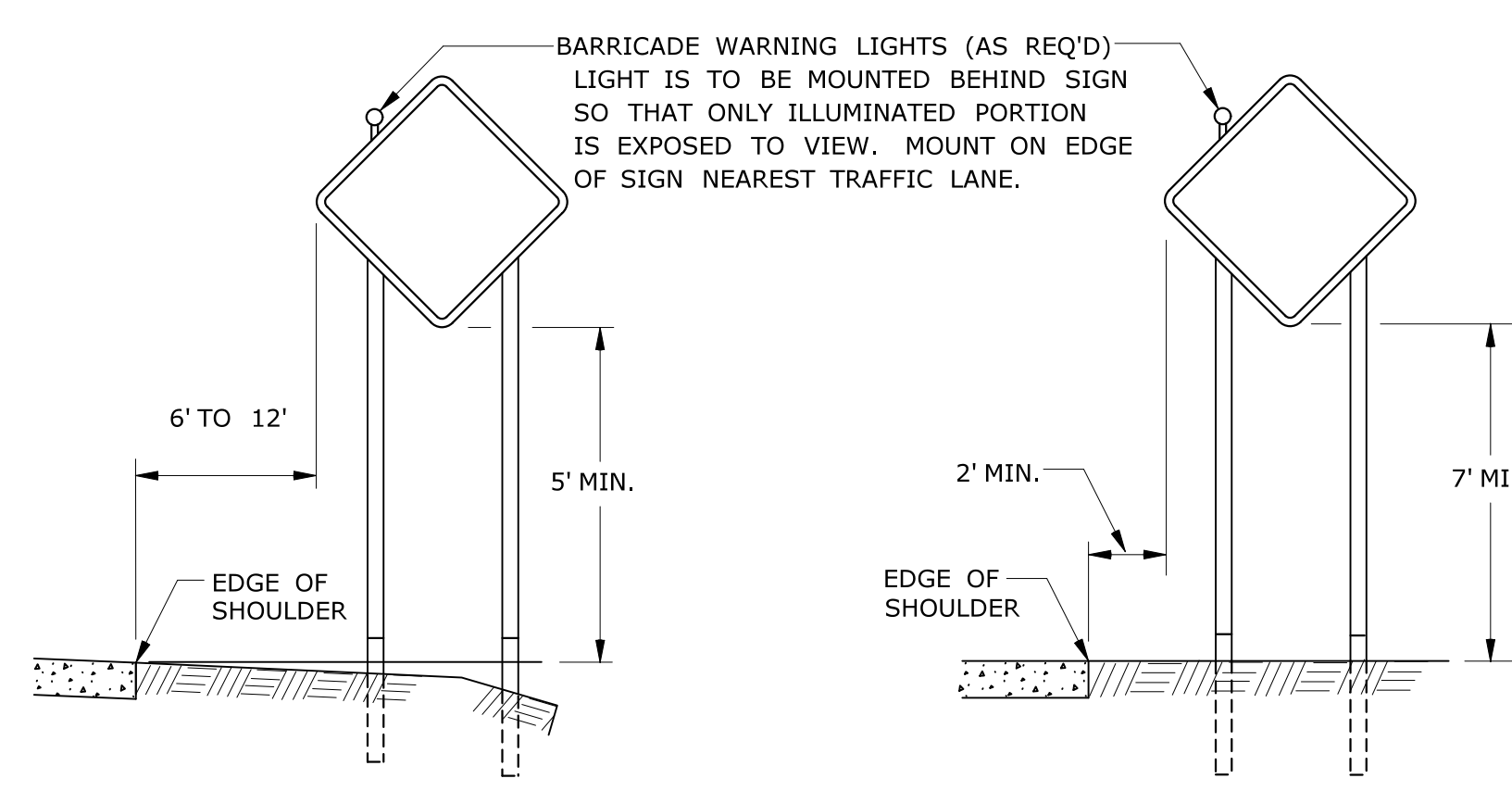
- TRAFFIC CONES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- IF RUBBER CONES ARE USED, THEY SHALL HAVE INTERIOR RIBS FOR RIGIDITY.
- IF PLASTIC CONES ARE USED, THEY SHALL BE COLOR IMPREGNATED.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY CONE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- THE ENTIRE AREA OF WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.
- TRAFFIC CONES NOT USED AT NIGHT MAY UTILIZE TYPE III SHEETING.
- THE SECTIONS OF CONES NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.



CONSTRUCTION BARRICADES

NOTES:

- CONSTRUCTION BARRICADES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH AND THE LATEST EDITION OF THE MUTCD.
- MARKINGS FOR BARRICADE RAILS SHALL BE ALTERNATE FLUORESCENT ORANGE AND WHITE STRIPES SLOPING DOWNWARD IN THE DIRECTION TRAFFIC IS TO PASS. 6" WIDE STRIPES SHALL BE USED.
- THE ENTIRE AREA OF FLUORESCENT ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS. THE SIDES OF BARRICADES FACING TRAFFIC SHALL HAVE RETROREFLECTIVE RAIL FACES.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY BARRICADE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- CORNERS OF BARRICADE RAILS SHALL BE ROUNDED.
- SIGNS MAY ONLY BE INSTALLED ON TYPE III BARRICADES AND SHALL BE PLACED SO AS TO COVER NO MORE THAN ONE BARRICADE RAIL.



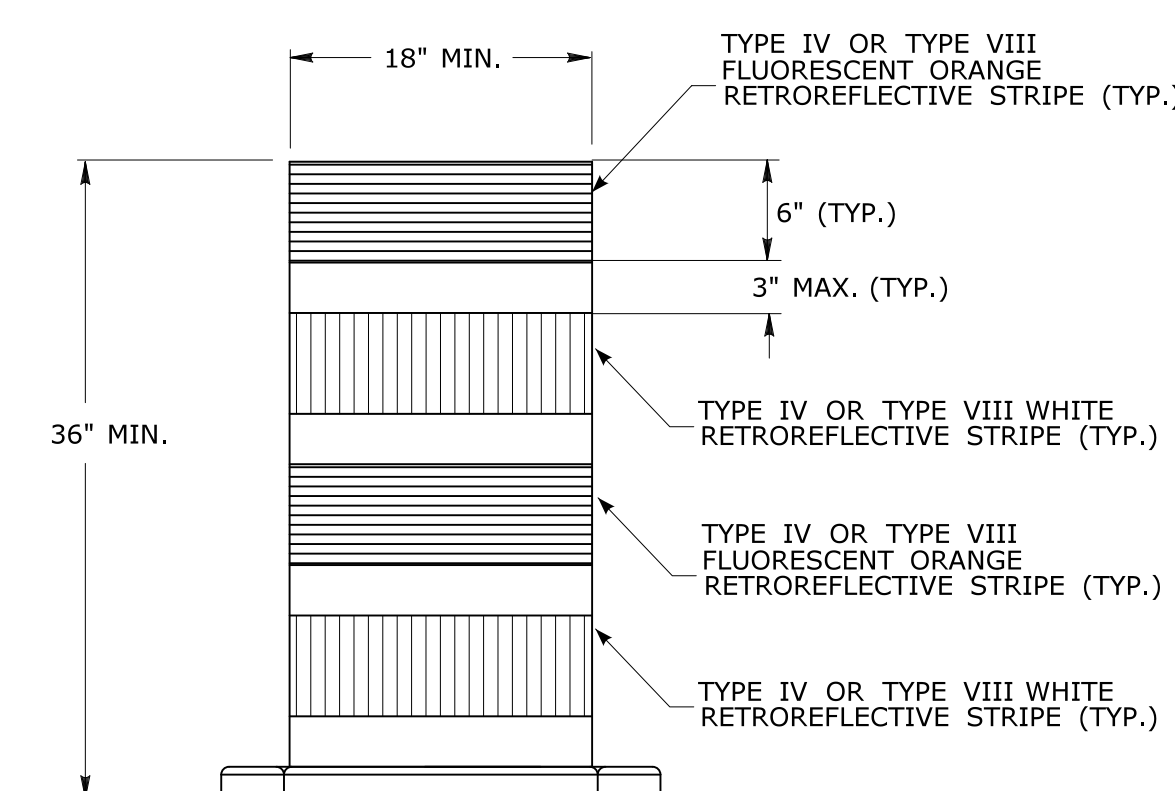
RURAL AREA

URBAN AREA

**PLACEMENT OF CONSTRUCTION SIGNS
TYPICAL LONG TERM INSTALLATION**

NOTES:

- SUPPORTS SHALL BE METAL SIGN POSTS AND HAVE BREAK-AWAY FEATURES.
- REFER TO STANDARD SHEETS:
 TR-1208.01 - "SIGN PLACEMENT AND RETROREFLECTIVE STRIP DETAILS."
 TR-1208.02 - "METAL SIGN POSTS AND SIGN MOUNTING DETAILS."



**TRAFFIC DRUM
FRONT VIEW**

NOTES:

- TRAFFIC DRUM SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY DRUM DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- THE ENTIRE AREA OF FLUORESCENT ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.
- THE SECTIONS OF DRUMS NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.		<p>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</p>	SUBMITTED BY: _____ NAME/DATE/TIME: _____	<p>CTDOT STANDARD SHEET</p> <p>OFFICE OF ENGINEERING</p>	STANDARD SHEET TITLE:	STANDARD SHEET NO.:
3 8-2018 UPDATED SHEETING TYPE AND COLOR.	2 8-2015 UPDATED PER MUTCD AND FORM 816 JAN 2015 REVISION.		APPROVED BY: _____ NAME/DATE/TIME: _____		<p>CONSTRUCTION SIGN SUPPORTS AND CHANNELIZING DEVICES</p>	<p>TR-1220_02</p>
1 2-2011 MINOR REVISIONS.	REV. DATE REVISION DESCRIPTION	NOT TO SCALE	Plotted Date: 8/10/2018	Filename: TR-1220.02.3.2018.dgn Model: TR-1220.02		