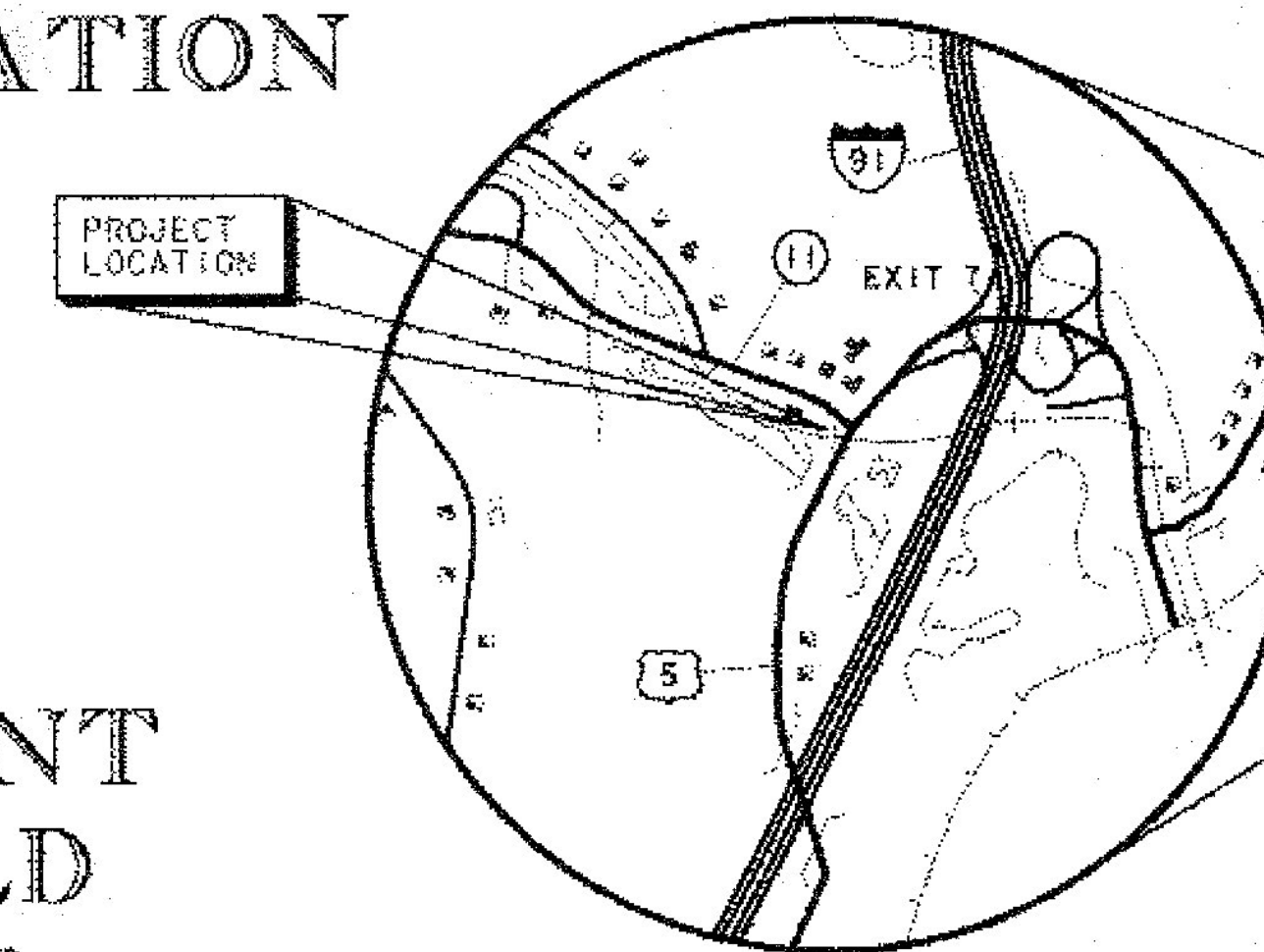


# STATE OF VERMONT AGENCY OF TRANSPORTATION



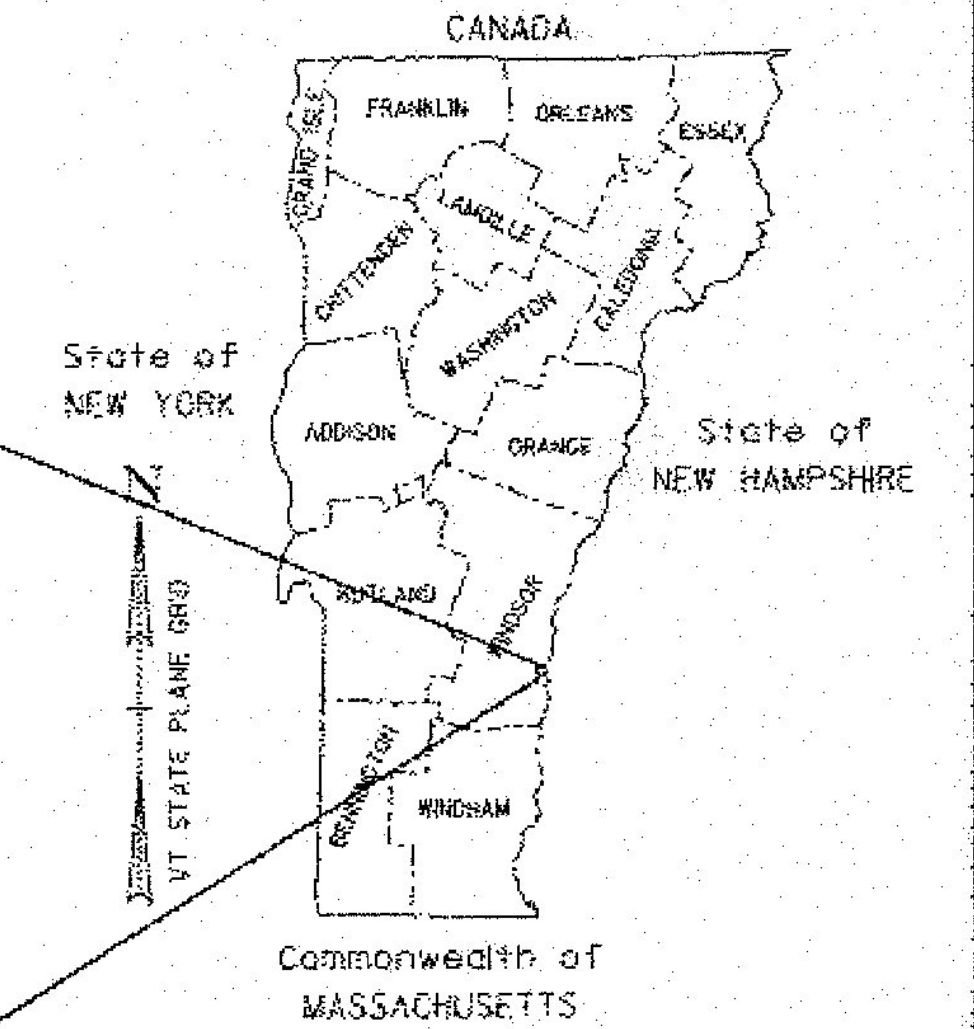
## PROPOSED IMPROVEMENT TOWN OF SPRINGFIELD COUNTY OF WINDSOR PARK AND RIDE LOT

THIS PROJECT IS LOCATED ON THE WESTERLY SIDE OF U.S. ROUTE 5 IN THE TOWN OF SPRINGFIELD AT THE INTERSECTION OF US ROUTE 5 AND VT ROUTE 11. WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES RECONSTRUCTION OF THE EXISTING PARK-AND-RIDE LOT, CONSTRUCTING A BUS SHELTER, RELOCATION OF EXISTING SHARED USE PATH, PAVEMENT MARKINGS, LIGHTING AND OTHER HIGHWAY RELATED ITEMS.

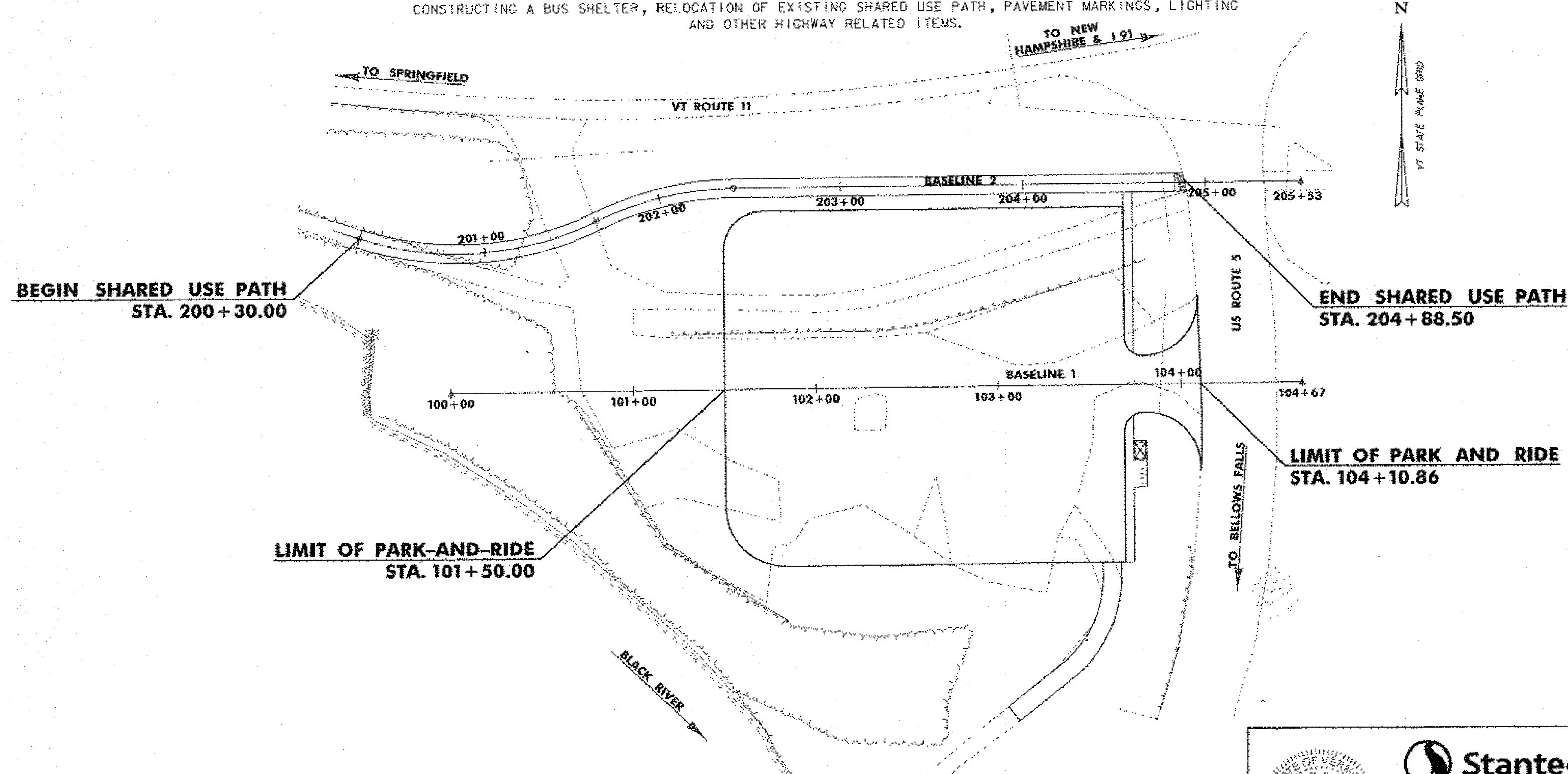


**LOCATION MAP**

0.33 0 0.33  
SCALE IN MILES



RECORD PLANS	
CONTRACTOR:	BAZIN BROTHERS TRUCKING, INC. - WESTMINSTER, VT
RESIDENT ENGINEER:	RYAN DARLING
CONSTRUCTION BEGAN:	MAY 4, 2015
CONSTRUCTION COMPLETE:	SEPTEMBER 25, 2015
RECORD PLANS BY:	RYAN DARLING & ELISE COOLBETH
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY:	RESIDENT ENGINEER
DATE:	02/23/2017
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.	



THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.  
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011 AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 3	
SURVEYED BY :	VSE INC.
SURVEYED DATE :	JUNE 2011
DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (1996)

100 0 100  
SCALE IN FEET



**Stantec**  
Stantec Consulting Services Inc.  
55 Green Mountain Drive  
Suite 200 Burlington VT 05403  
Phone: (802) 864-0222  
Fax: (802) 864-0100  
www.stantec.com

DIRECTOR OF PROGRAM DEVELOPMENT	
APPROVED:	DATE 6.25.17
PROJECT MANAGER : TINA BOHEL	
PROJECT NAME : SPRINGFIELD	
PROJECT NUMBER : CMG PARK (32)	
SHEET 1 OF 43 SHEETS	

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11	SURVEY CONTROL AND TIES
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13	PROFILE SHEET
14	GRADING AND DRAINAGE PLAN
15	SIGNING AND PAVEMENT MARKING PLAN
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19	SIGN DETAILS
20	LIGHTING AND LANDSCAPING PLAN
21	LIGHTING AND LANDSCAPING DETAILS
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24	UTILITY RELOCATION PLAN
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29	CONSTRUCTION APPROACH SIGNING
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39	EPSC CONSTRUCTION SITE PLAN
40	EPSC FINAL CONDITIONS SITE PLAN
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## GENERAL NOTES

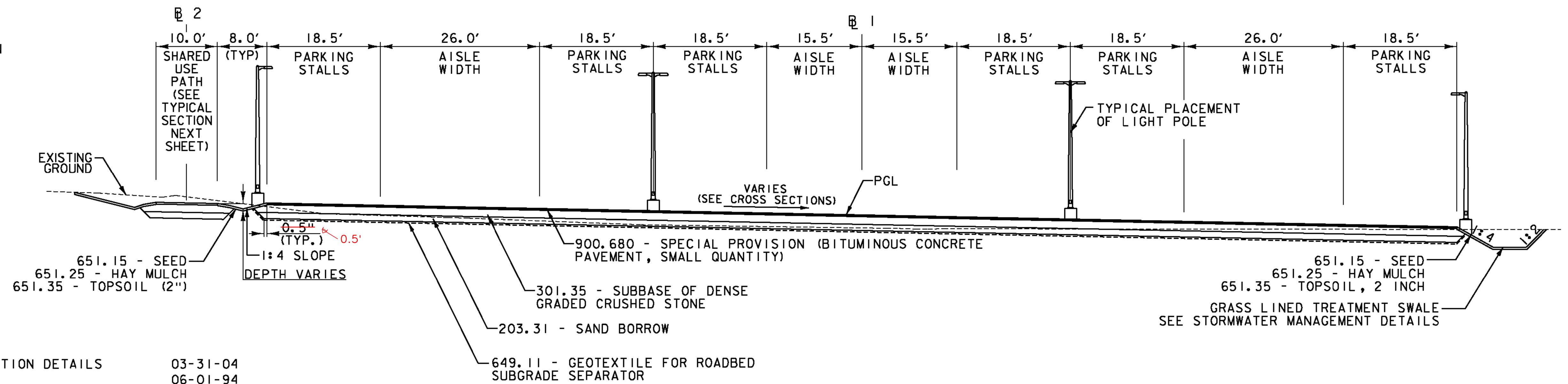
- FOR LIGHT LOCATIONS, SEE LIGHTING PLAN.
- SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5 UNLESS OTHERWISE NOTED.
- EMULSIFIED ASPHALT SHALL BE APPLIED BETWEEN ALL COURSES OF PAVEMENT AND ON ALL COLD PLANED SURFACES AT THE RATE OF 0.025 GAL/SY OR AS DIRECTED BY THE ENGINEER.
- SAW CUT PAID INCIDENTAL TO ITEM 900.680 (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY).
- COLD PLANING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 210.
- FOR PG BINDER GRADE SEE BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY OF SECTION 900 OF THE SPECIAL PROVISIONS.

# TYPICAL SECTIONS

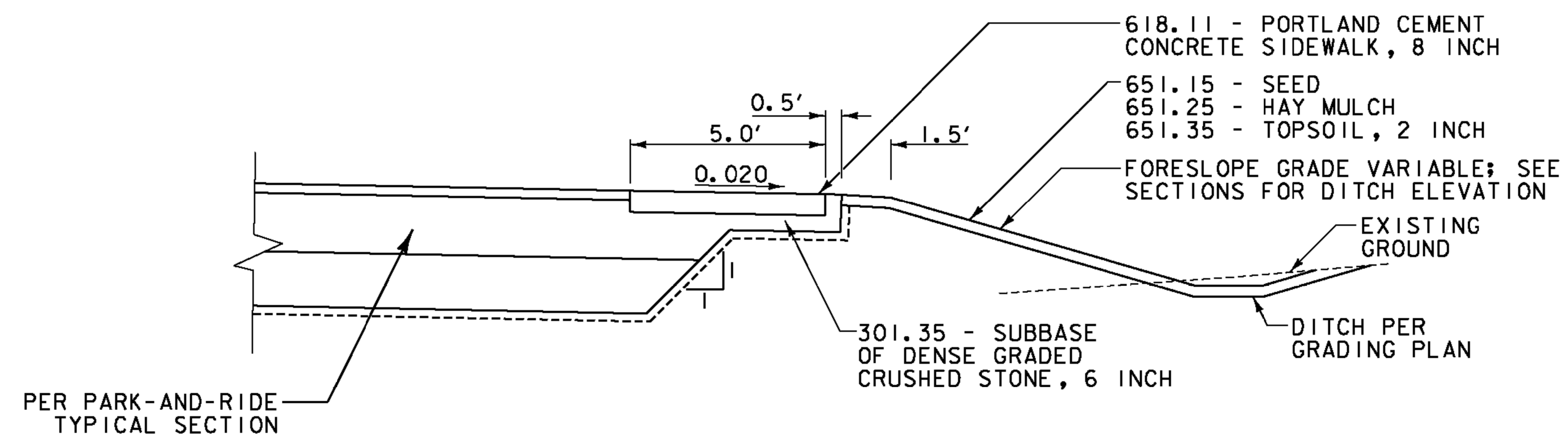
1 1/2" BITUMINOUS CONCRETE PAVEMENT (1 LIFT - TYPE IVS)  
 3 1/2" BITUMINOUS CONCRETE PAVEMENT (1 LIFT - TYPE IIS)  
 15" SUBBASE OF DENSE GRADED CRUSHED STONE  
 12" SAND BORROW  
 GEOTEXTILE FOR ROADBED SUBGRADE SEPARATOR

## MATERIAL ITEM THICKNESS /TOLERANCE

BITUMINOUS CONCRETE PAVEMENT +/- 1/4" (TOTAL DEPTH)  
 DENSE GRADED CRUSHED STONE +/- 1/2" (TOTAL DEPTH)  
 SAND BORROW +/- 1" (TOTAL DEPTH)



**PARK-AND-RIDE TYPICAL SECTION**  
 (PERPENDICULAR TO BASELINE 1 AND 2, SEE LAYOUT PLAN)  
 NOT TO SCALE

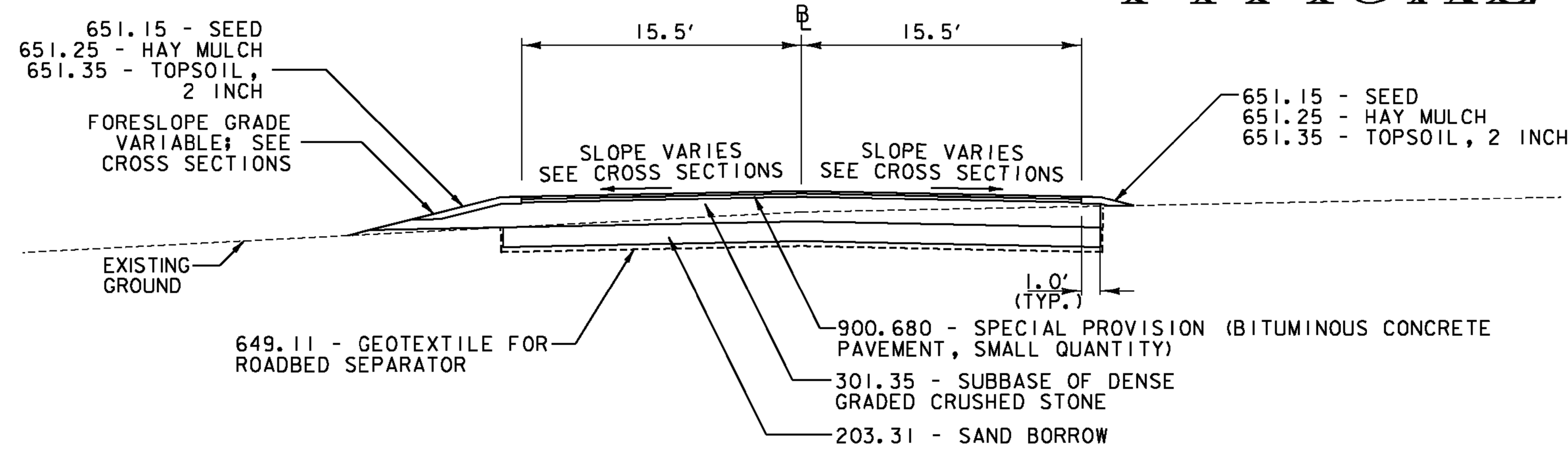


**SIDEWALK DETAIL SECTION A-A**  
 NOT TO SCALE



PROJECT NAME:	SPRINGFIELD
PROJECT NUMBER:	CMG PARK (32)
FILE NAME:	z09k250+yp.dgn
PROJECT LEADER:	G. SANTY
DESIGNED BY:	I. MAYNARD
TYPICAL SECTIONS SHEET 1	
PLOT DATE:	6/25/2014
DRAWN BY:	I. MAYNARD
CHECKED BY:	M. FOISY
SHEET	2 OF 43

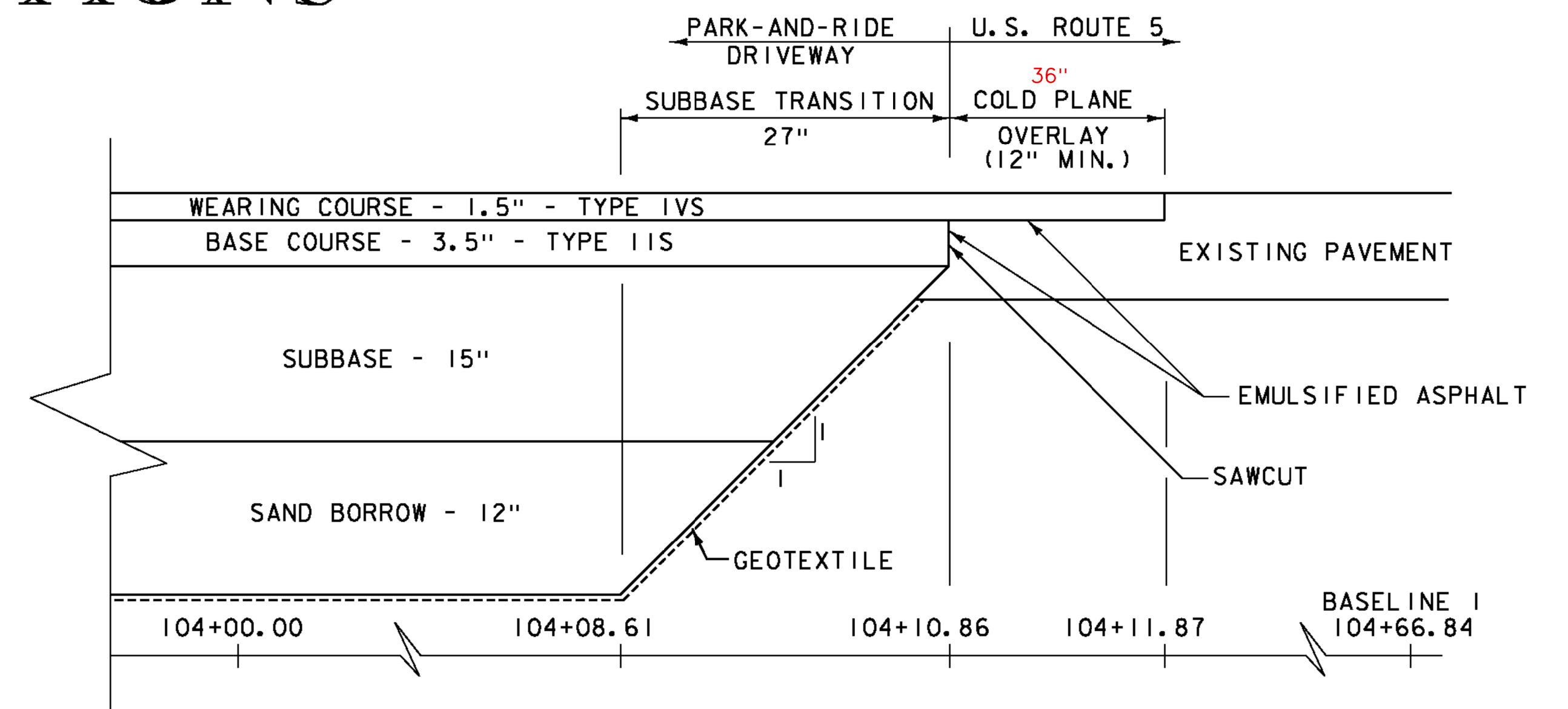
# TYPICAL SECTIONS



**PARK-AND-RIDE DRIVEWAY ENTRANCE TYPICAL SECTION (ALONG BASELINE 1)**

NOT TO SCALE

- 1 1/2" BITUMINOUS CONCRETE PAVEMENT (1 LIFT - TYPE IVS)
- 3 1/2" BITUMINOUS CONCRETE PAVEMENT (1 LIFT - TYPE IIS)
- 15" SUBBASE OF DENSE GRADED CRUSHED STONE 2 LIFTS
- 12" SAND BORROW
- GEOTEXTILE FOR ROADBED SEPARATOR



**PAVEMENT & SUBBASE TRANSITION TYPICAL (DRIVEWAY)**

NOT TO SCALE

SEEDING FORMULA: LOW GROW / FINE FESCUE				
% WEIGHT	LBS/AC		NAME	GERM %
	BROADCAST	HYDROSEED		
37.6%	75.2	94	CREeping RED FESCUE/DEN	90%
28.4%	56.8	71	SPARTAN HARD FESCUE	85%
14.4%	28.8	36	AZAY SHEEPS FESCUE	87%
14.2%	28.4	35.5	ANNUAL RYEGRASS	90%
1.0%	2	2.5	CROP	
4.3%	8.6	10.8	INERT	
0.1%	0.2	0.2	WEED	
100%	200	250		

PERCENT OF SEED, CROP, WEED OR INERT MAY VARY +/- 2%. VARIETIES OF GRASSES MAY BE SUBSTITUTED ONLY WITH APPROVAL FROM RESIDENT ENGINEER.

MOWING: RECOMMENDED EARLY MOWING ONCE OR TWICE WHEN GRASS REACHES 6 INCHES HEIGHT MAXIMUM TO PREVENT BROADLEAF WEED COMPETITION DURING ESTABLISHMENT PERIOD.

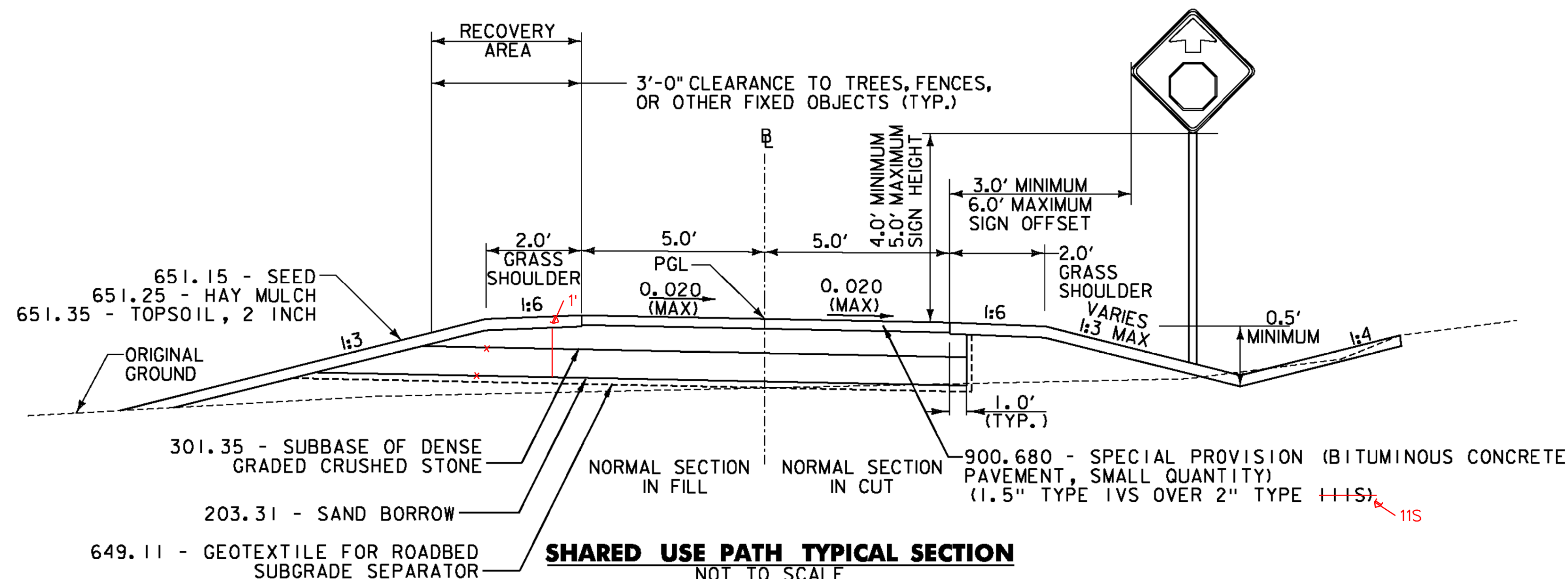
FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER

HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.

TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED

TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.



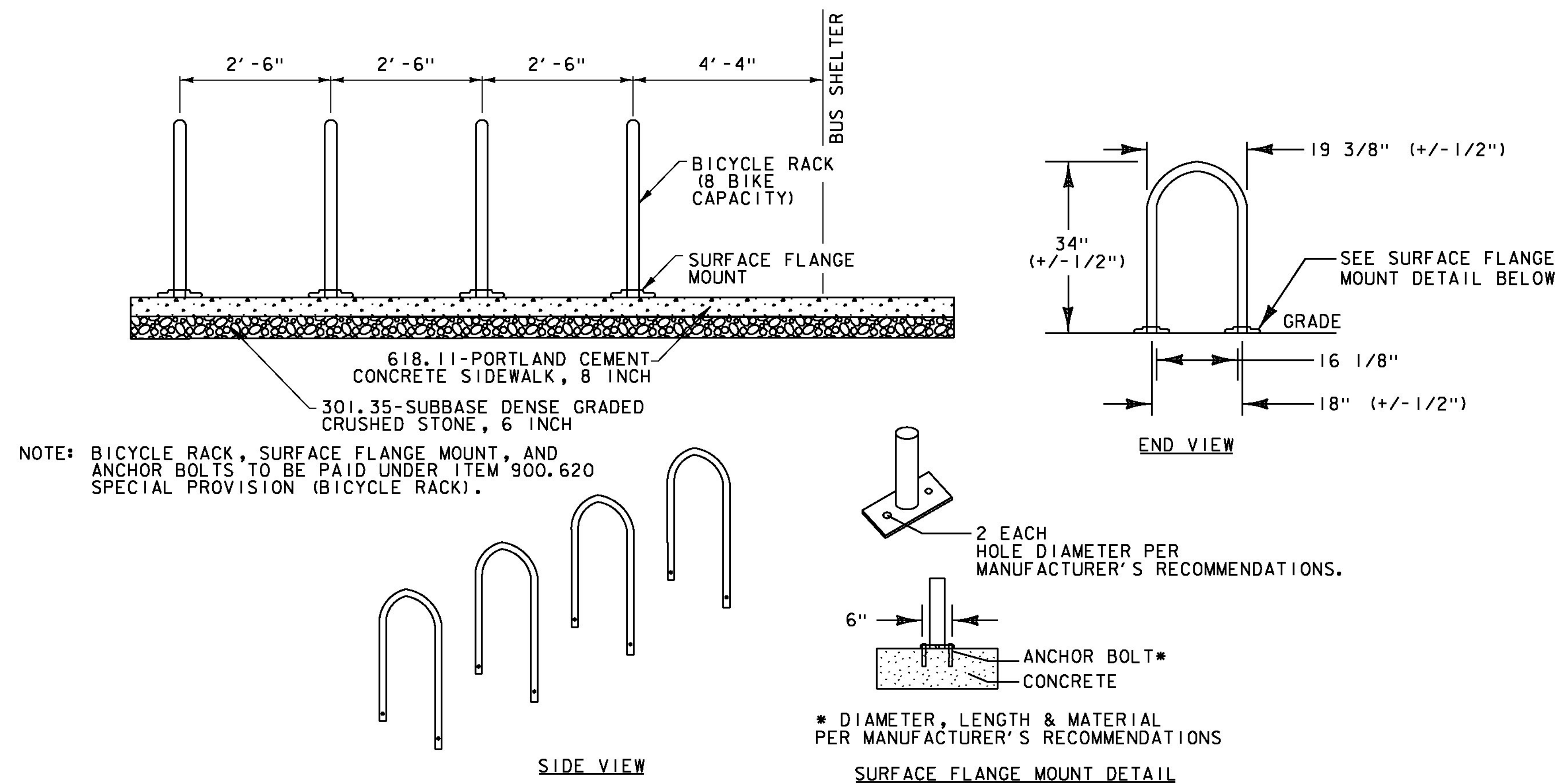
**SHARED USE PATH TYPICAL SECTION**

NOT TO SCALE

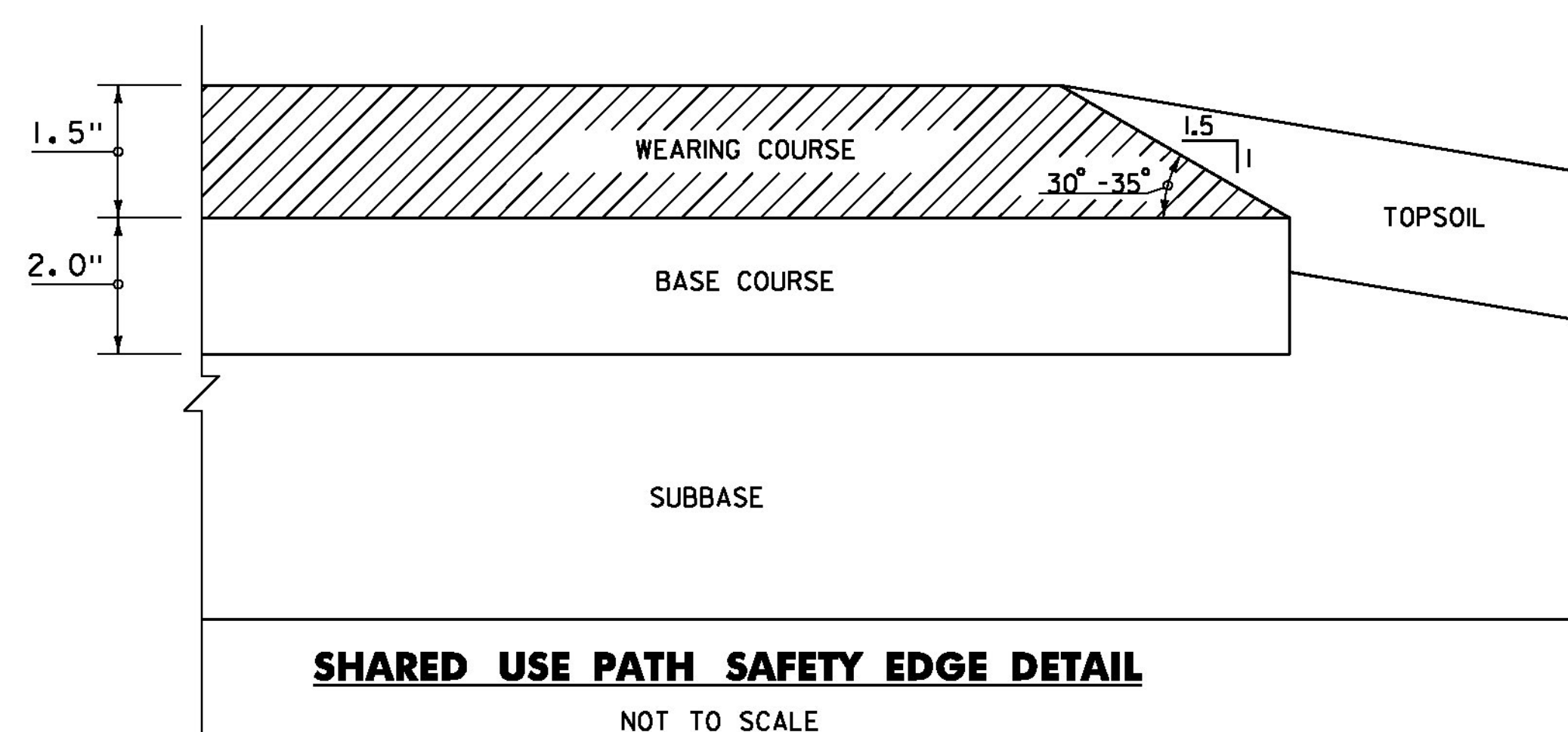
- 3 1/2" BITUMINOUS CONCRETE PAVEMENT (1.5" TYPE IVS OVER 2" TYPE IIS)
- 8" SUBBASE OF DENSE GRADED CRUSHED STONE
- 12" SAND BORROW
- GEOTEXTILE FOR ROADBED SUBGRADE SEPARATOR



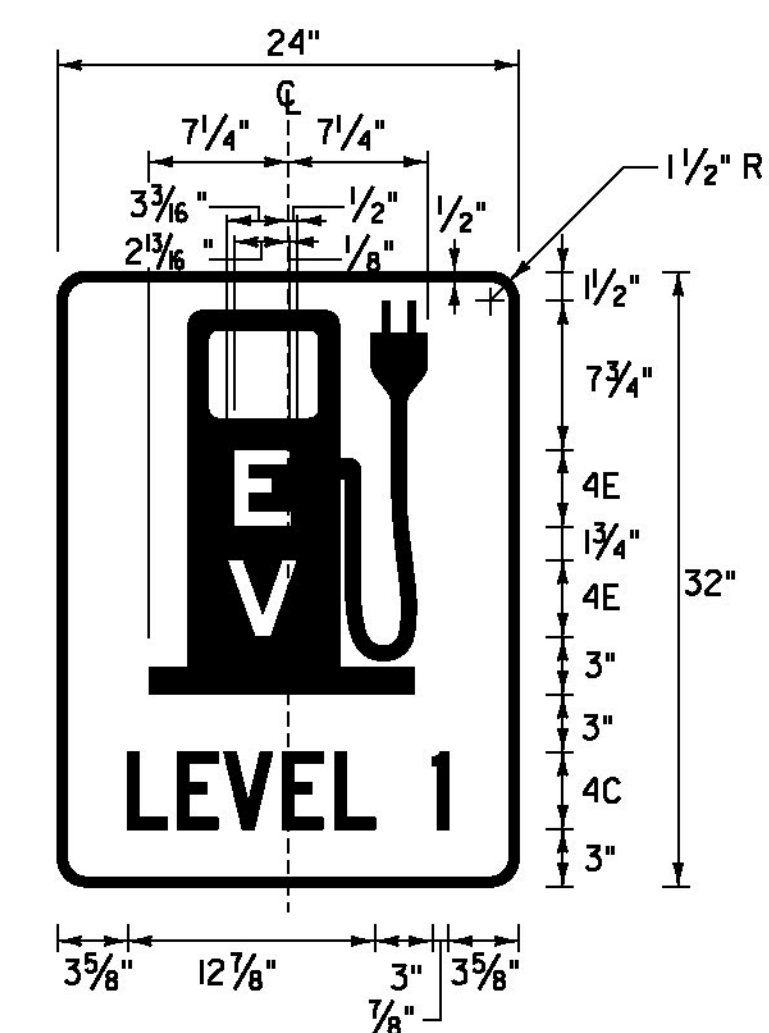
PROJECT NAME: SPRINGFIELD	PLOT DATE: 6/25/2014
PROJECT NUMBER: CMG PARK (32)	DRAWN BY: I. MAYNARD
FILE NAME: z09k250+yp.dgn	CHECKED BY: M. FOISY
PROJECT LEADER: G. SANTY	SHEET 3 OF 43
DESIGNED BY: I. MAYNARD	TYPICAL SECTIONS SHEET 2



**SPECIAL PROVISION (BICYCLE RACK) DETAIL**  
NOT TO SCALE



**SHARED USE PATH SAFETY EDGE DETAIL**  
NOT TO SCALE



**EV OUTLET, LEVEL 1 - SIGN DETAIL**  
SEE SHEETS 15 - 17 FOR PLACEMENT

PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09k250+yp.dgn PLOT DATE: 6/25/2014  
PROJECT LEADER: G. SANTY DRAWN BY: I. MAYNARD  
DESIGNED BY: I. MAYNARD CHECKED BY: M. FOISY  
TYPICAL SECTIONS SHEET 3 SHEET 4 OF 43



**GENERAL INFORMATION**

**SYMBOLGY LEGEND NOTE**

THE SYMBOLGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLGY. THE SYMBOLGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

**R. O. W. ABBREVIATIONS (CODES) & SYMBOLS**

POINT CODE	DESCRIPTION
CH	CHANNEL EASEMENT
CONST	CONSTRUCTION EASEMENT
CUL	CULVERT EASEMENT
D&C	DISCONNECT & CONNECT
DIT	DITCH EASEMENT
DR	DRAINAGE EASEMENT
DRIVE	DRIVEWAY EASEMENT
EC	EROSION CONTROL
HWY	HIGHWAY EASEMENT
I&M	INSTALL & MAINTAIN EASEMENT
LAND	LANDSCAPE EASEMENT
R&RES	REMOVE & RESET
R&REP	REMOVE & REPLACE
SR	SLOPE RIGHT
UE	UTILITY EASEMENT
(P)	PERMANENT EASEMENT
(T)	TEMPORARY EASEMENT
■	BNDNS BOUND SET
▣	BNDNS BOUND TO BE SET
●	IPNS IRON PIN SET
⊙	IPNS IRON PIN TO BE SET
⊠	CALC EXISTING ROW POINT
○	PROW PROPOSED ROW POINT
[LENGTH]	LENGTH CARRIED ON NEXT SHEET

**COMMON TOPOGRAPHIC POINT SYMBOLS**

POINT CODE	DESCRIPTION
⊛	APL BOUND APPARENT LOCATION
▣	BM BENCH MARK
□	BND BOUND
▣	CB CATCH BASIN
⊕	COMB COMBINATION POLE
⊕	DITHR DROP INLET THROATED DNC
⊕	EL ELECTRIC POWER POLE
⊙	FPOLE FLAGPOLE
⊙	GASFIL GAS FILLER
⊙	GP GUIDE POST
⊙	GSO GAS SHUT OFF
⊙	GUY GUY POLE
⊙	GUYW GUY WIRE
⊙	GV GATE VALUE
⊙	H TREE HARDWOOD
△	HCTRL CONTROL HORIZONTAL
△	HVCTRL CONTROL HORIZ. & VERTICAL
⊕	HYD HYDRANT
⊙	IP IRON PIN
⊙	IPIPE IRON PIPE
⊕	LI LIGHT - STREET OR YARD
⊙	MB MAILBOX
⊙	MH MANHOLE (MH)
□	MM MILE MARKER
⊙	PM PARKING METER
□	PMK PROJECT MARKER
⊙	POST POST STONE/WOOD
⊕	RRSIG RAILROAD SIGNAL
⊕	RRSL RAILROAD SWITCH LEVER
⊕	S TREE SOFTWOOD
⊕	SAT SATELLITE DISH
⊕	SHRUB SHRUB
⊕	SIGN SIGN
⊕	STUMP STUMP
⊕	TEL TELEPHONE POLE
⊕	TIE TIE
⊕	TSIGN SIGN W/DOUBLE POST
⊕	VCTRL CONTROL VERTICAL
⊕	WELL WELL
⊕	WSO WATER SHUT OFF

THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

**PROPOSED GEOMETRY CODES**

CODE	DESCRIPTION
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
CC	CENTER OF CURVE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
POB	POINT OF BEGINNING
POE	POINT OF ENDING
STA	STATION PREFIX
AH	AHEAD STATION SUFFIX
BK	BACK STATION SUFFIX
D	CURVE DEGREE OF (100FT)
R	CURVE RADUIS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE

**UTILITY SYMBOLGY**

UNDERGROUND UTILITIES	
— UT —	TELEPHONE
— UE —	ELECTRIC
— UC —	CABLE (TV)
— UEC —	ELECTRIC+CABLE
— UET —	ELECTRIC+TELEPHONE
— UCT —	CABLE+TELEPHONE
— UECT —	ELECTRIC+CABLE+TELEP.
— G —	GAS LINE
— W —	WATER LINE
— S —	SANITARY SEWER (SEPTIC)

**ABOVE GROUND UTILITIES (AERIAL)**

— T —	TELEPHONE
— E —	ELECTRIC
— C —	CABLE (TV)
— EC —	ELECTRIC+CABLE
— ET —	ELECTRIC+TELEPHONE
— AER E&T —	ELECTRIC+TELEPHONE
— CT —	CABLE+TELEPHONE
— ECT —	ELECTRIC+CABLE+TELEP.
—	UTILITY POLE GUY WIRE

**PROJECT CONSTRUCTION SYMBOLGY**

PROJECT DESIGN & LAYOUT SYMBOLGY	
— — — — —	CLEAR ZONE
— — — — —	PLAN LAYOUT MATCHLINE

**PROJECT CONSTRUCTION FEATURES**

▲ —▲—▲—▲—▲	TOP OF CUT SLOPE
○ —○—○—○—○	TOE OF FILL SLOPE
⊕ —⊕—⊕—⊕—⊕	STONE FILL
— — — — —	BOTTOM OF DITCH 'L
— — — — —	CULVERT PROPOSED
— — — — —	STRUCTURE SUBSURFACE
PDF — PDF —	PROJECT DEMARCATION FENCE
BF — BF —	BARRIER FENCE
⊠ —⊠—⊠—⊠—⊠	TREE PROTECTION ZONE (TPZ)
/// —///—///—///—///	STRIPING LINE REMOVAL
~~~~~	SHEET PILES

**CONVENTIONAL BOUNDARY SYMBOLGY**

BOUNDARY LINES	
— TOWN LINE —	TOWN BOUNDARY LINE
— COUNTY LINE —	COUNTY BOUNDARY LINE
— STATE LINE —	STATE BOUNDARY LINE
— — — — —	PROPOSED STATE R.O.W. (LIMITED ACCESS)
— — — — —	PROPOSED STATE R.O.W.
— — — — —	STATE ROW (LIMITED ACCESS)
— — — — —	STATE ROW
— — — — —	TOWN ROW
— — — — —	PERMANENT EASEMENT LINE (P)
— — — — —	TEMPORARY EASEMENT LINE (T)
— — — — —	SURVEY LINE
— — — — —	PROPERTY LINE (P/L)
SR — SR — SR —	SLOPE RIGHTS
6f — 6f —	6F PROPERTY BOUNDARY
4f — 4f —	4F PROPERTY BOUNDARY
HAZ — HAZ —	HAZARDOUS WASTE

**EPSC LAYOUT PLAN SYMBOLGY**

EPSC MEASURES	
ONNOONNOONNO	FILTER CURTAIN
— — — — —	SILT FENCE
— X — X — X — X —	SILT FENCE WOVEN WIRE
— — — — —	CHECK DAM
— — — — —	DISTURBED AREAS REQUIRING RE-VEGETATION
⊕	EROSION MATTING

**ENVIRONMENTAL RESOURCES**

— — — — —	WETLAND BOUNDARY
— — — — —	RIPARIAN BUFFER ZONE
— — — — —	WETLAND BUFFER ZONE
— — — — —	SOIL TYPE BOUNDARY
— — — — —	THREATENED & ENDANGERED SPECIES
HAZ — HAZ —	HAZARDOUS WASTE AREA
— — — — —	AGRICULTURAL LAND
— — — — —	FISH & WILDLIFE HABITAT
— — — — —	FLOOD PLAIN
— — — — —	ORDINARY HIGH WATER (OHW)
— — — — —	STORM WATER
— — — — —	USDA FOREST SERVICE LANDS
— — — — —	WILDLIFE HABITAT SUIT/CONN

**ARCHEOLOGICAL & HISTORIC**

— — — — —	ARCHEOLOGICAL BOUNDARY
— — — — —	HISTORIC DISTRICT BOUNDARY
— — — — —	HISTORIC AREA
Ⓜ	HISTORIC STRUCTURE

**CONVENTIONAL TOPOGRAPHIC SYMBOLGY**

EXISTING FEATURES	
— — — — —	ROAD EDGE PAVEMENT
— — — — —	ROAD EDGE GRAVEL
— — — — —	DRIVEWAY EDGE
— — — — —	DITCH
— — — — —	FOUNDATION
x — x — x — x —	FENCE (EXISTING)
□ — □ — □ — □ —	FENCE WOOD POST
○ — ○ — ○ — ○ —	FENCE STEEL POST
— — — — —	GARDEN
— — — — —	ROAD GUARDRAIL
	RAILROAD TRACKS
— — — — —	CULVERT (EXISTING)
— — — — —	STONE WALL
— — — — —	WALL
— — — — —	WOOD LINE
— — — — —	BRUSH LINE
— — — — —	HEDGE
— — — — —	BODY OF WATER EDGE
— — — — —	LEDGE EXPOSED

PROJECT NAME: SPRINGFIELD  
 PROJECT NUMBER: CMG PARK (32)  
 FILE NAME: z09K250frm.dgn PLOT DATE: 6/25/2014  
 PROJECT LEADER: VAOT DRAWN BY: VAOT  
 DESIGNED BY: VAOT CHECKED BY: VAOT  
 CONVENTIONAL SYMBOLGY - LEGEND SHEET SHEET 5 OF 43

# QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
						ROADWAY	LANDSCAPING	EROSION CONTROL	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						1				1	1	LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	-			
						6900				6900	7117.1	CY	COMMON EXCAVATION	203.15	47			
						225				225	222	CY	EXCAVATION OF SURFACES AND PAVEMENTS	203.28	6			
						1850				1850	1652.6	CY	SAND BORROW	203.31	18			
						94				94	81.7	CY	TRENCH EXCAVATION OF EARTH	204.20	1			
						1				1	0	CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-			
						11				11	29.2	SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	0.6			
						2300				2300	2311.3	CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	49			
						10				10	17.5	CY	AGGREGATE SURFACE COURSE	401.10	0.1			
						23				23	22.18	CWT	EMULSIFIED ASPHALT	404.65	1			
						1				1	-5224.04	LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-			
						120				120	138.72	LB	REINFORCING STEEL, LEVEL I	507.11	1			
						1				1	10	GAL	WATER REPELLENT, SILANE	514.10	EST.			
						2				2	1.94	CY	CONCRETE, CLASS B	541.25	0.5			
						30				30	28	LF	15" CPEP(SL)	601.2610	-			
						42				42	33.5	LF	18" CPEP(SL)	601.2615	-			
						2				2	2	EACH	15" CPEPES	601.7010	-			
						2				2	2	EACH	18" CPEPES	601.7015	-			
						1				1	1	EACH	CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES	604.40	-			
						1				1	0	EACH	CAST IRON COVER WITH FRAME	604.55	-			
						1				1	5	HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	EST.			
						10				10	0	HR	POWER BROOM RENTAL, TYPE I	608.30	EST.			
						1				1	7.5	HR	TRUCK RENTAL	608.37	EST.			
						155				155	0.3	MGAL	DUST CONTROL WITH WATER	609.10	2			
						23				23	18	CY	STONE FILL, TYPE I	613.10	0.5			
						115				115	109	SY	PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH	618.11	5			
						20				20	16	SF	DETECTABLE WARNING SURFACE	618.30	-			
						3				3	3	EACH	BOLLARDS	619.14	-			
						4				4	4	EACH	YIELDING MARKER POSTS	619.17	-			
						645				645	641.3	LF	CHAIN-LINK FENCE, 4 FEET	620.11	5			
						8				8	10	EACH	BRACING ASSEMBLY FOR CHAIN-LINK FENCE, 4 FEET	620.20	-			
						435				435	425	LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	-			
						9				9	9	EACH	REMOVAL AND DISPOSAL OF GUIDE POSTS	621.81	-			
						10				10	0	HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.			
						100				100	0	HR	FLAGGERS	630.15	EST.			
									1	1	1	LS	FIELD OFFICE, ENGINEERS	631.10	-			
									1	1	1	LS	TESTING EQUIPMENT, CONCRETE	631.16	-			
									1	1	1	LS	TESTING EQUIPMENT, BITUMINOUS	631.17	-			
									3000	3000	818.41	DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26	-			
						1				1	1	LS	MOBILIZATION/DEMOBILIZATION	635.11	-			

PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09K250frm.dgn  
PROJECT LEADER: G. SANTY  
DESIGNED BY: I. MAYNARD  
QUANTITY SHEET 1

PLOT DATE: 6/25/2014  
DRAWN BY: I. MAYNARD  
CHECKED BY: M. FOISY  
SHEET 6 OF 43



# QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
						ROADWAY	LANDSCAPING	EROSION CONTROL	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						1				1	1	LS	TRAFFIC CONTROL	641.10	-			
						3				3	3	EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-			
						42				42	42	DAY	PORTABLE CHANGEABLE MESSAGE SIGN RENTAL	641.17	EST.			
						3700				3700	-	LF	DURABLE 4 INCH WHITE LINE, EPOXY PAINT	646.403	86			
						420				420	-	LF	DURABLE 4 INCH YELLOW LINE, EPOXY PAINT	646.413	2			
						10				10	-	LF	DURABLE 12 INCH WHITE LINE, EPOXY PAINT	646.463	-			
						29				29	-	LF	DURABLE 24 INCH STOP BAR, EPOXY PAINT	646.483	-			
						24				24	-	EACH	DURABLE LETTER OR SYMBOL, EPOXY PAINT	646.493	-			
						6050				6050	6279	SY	GEOTEXTILE FOR ROADBED SEPARATOR	649.11	33			
						85				85	68	SY	GEOTEXTILE UNDER STONE FILL	649.31	3			
								145		145	91	SY	GEOTEXTILE FOR SILT FENCE	649.51	3			
								100		100	196	LB	SEED	651.15	2			
								620		620	500	LB	FERTILIZER	651.18	5			
								2.5		2.5	0.27	TON	AGRICULTURAL LIMESTONE	651.20	-			
								2.8		2.8	1.97	TON	HAY MULCH	651.25	0.1			
								660		660	340.2	CY	TOPSOIL	651.35	7			
								1		1	1	LS	EPSC PLAN	652.10	-			
								60		60	22	HR	MONITORING EPSC PLAN	652.20	EST.			
								1		1	0	LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30	-			
								2000		2000	1364	SY	TEMPORARY EROSION MATTING	653.20	15			
								60		60	5.95	CY	TEMPORARY STONE CHECK DAM, TYPE I	653.25	1			
								65		65	15.9	CY	VEHICLE TRACKING PAD	653.35	5			
								4		4	2	EACH	INLET PROTECTION DEVICE, TYPE I	653.40	-			
								640		640	1048	LF	BARRIER FENCE	653.50	5			
								150		150	170	LF	PROJECT DEMARCATION FENCE	653.55	2			
							7			7	7	EACH	DECIDUOUS TREES (ACER RUBRUM)(B&B)(2.5-3" CAL.)	656.30	-			
							20			20	7.5	CY	LANDSCAPE BACKFILL, TRUCK MEASUREMENT	656.80	1			
						163				163	163.69	SF	TRAFFIC SIGNS, TYPE A	675.20	0.78			
						210				210	186	LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	-			
						11				11	13	EACH	REMOVING SIGNS	675.50	-			
						2				2	4	EACH	ERECTING SALVAGED SIGNS	675.60	-			
						1198				1198	1170.3	LF	WIRED CONDUIT (2")PVC)(SCH. 80)	678.23	-			
						112				112	114.1	LF	WIRED CONDUIT (3")PVC)(SCH. 80)	678.23	-			
						4				4	4	EACH	JUNCTION BOX	678.26	-			
						147				147	134.3	LF	ELECTRICAL CONDUIT SLEEVE (4")PVC)(SCH. 80)	678.30	-			
						14				14	14	EACH	LIGHT POLE BASE	679.21	-			
						14				14	14	EACH	LIGHT POLE	679.45	-			
						1				1	1	EACH	POWER DROP STANCHION, STREET LIGHTING	679.55	-			
						1				1	-13092.3	LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-			
						1				1	1	EACH	SPECIAL PROVISION (BICYCLE RACK)	900.620	-			

PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09K250frm.dgn  
PROJECT LEADER: G. SANTY  
DESIGNED BY: I. MAYNARD  
QUANTITY SHEET 2

PLOT DATE: 7/22/2014  
DRAWN BY: I. MAYNARD  
CHECKED BY: M. FOISY  
SHEET 7 OF 43



# QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
							ROADWAY	LANDSCAPING	EROSION CONTROL	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
							18	18			18	18	EACH	SPECIAL PROVISION (ELECTRIC VEHICLE OUTLET, LEVEL 1)	900.620	-			SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)
							20	20			20	20	EACH	SPECIAL PROVISION (LUMINAIRE, LED)	900.620	-	995.9996	TON	PARKING LOT & ENTRANCE (TYPE IIS)
							3	3			3	3	EACH	SPECIAL PROVISION (REMOVE EXISTING LIGHT POLE)	900.620	-	503.88427	TON	PARKING LOT & ENTRANCE (TYPE IVS)
							1	1			1	1	LS	SPECIAL PROVISION (BUS SHELTER)	900.645	-	76.12103	TON	SHARED USE PATH (TYPE IIS) 11S
							1	0			1	0	LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY)(N.A.B.I.)	900.650	-	46.544	TON	SHARED USE PATH (TYPE IVS)
							1	0			1	0	LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT)	900.650	-	0.030	TON	ROUNDING
							1600	1622.4			1600	1622.4	TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680	30	1600	TON	TOTAL
							0				0	1	LS	SUPPLEMENTAL AGREEMENT (TEMPORARY PARK AND RIDE TRAFFIC CONTROL) (ITEM ADDED WITH COD 001)	900.545	-	1622.4		
							0				0	4.25	CY	CONCRETE, CLASS D (MOD. - FLOWABLE FILL) (ITEM ADDED WITH COD 002)	541.31	-			
							0				0	5	EACH	LETTER AND SYMBOL, WATERBORNE PAINT (ITEM ADDED WITH COD 004)	646.301	-			
							0				0	3776	LF	DURABLE 4 IN WHITE LINE, POLYUREA (ITEM ADDED WITH COD 004)	646.404	-			
							0				0	437	LF	DURABLE 4 IN YELLOW LINE, POLYUREA (ITEM ADDED WITH COD 004)	646.414	-			
							0				0	10	LF	DURABLE 12 IN WHITE LINE, POLYUREA (ITEM ADDED WITH COD 004)	646.464	-			
							0				0	26.5	LF	DURABLE 24 IN STOP BAR, POLYUREA (ITEM ADDED WITH COD 004)	646.484	-			
							0				0	20	EACH	DURABLE LETTER OR SYMBOL, POLYUREA (ITEM ADDED WITH COD 004)	646.494	-			
							0				0	1	LS	SUPPLEMENTAL AGREEMENT (678.26 JUNCTION BOX (MOD)) (ITEM ADDED WITH COD 005)	900.545	-			
							0				0	1	LS	SUPPLEMENTAL AGREEMENT (679.45LIGHT POLE (MOD))	900.545	-			

PROJECT NAME: SPRINGFIELD  
 PROJECT NUMBER: CMG PARK (32)  
 FILE NAME: z09K250frm.dgn  
 PROJECT LEADER: G. SANTY  
 DESIGNED BY: I. MAYNARD  
 QUANTITY SHEET 3

PLOT DATE: 7/22/2014  
 DRAWN BY: I. MAYNARD  
 CHECKED BY: M. FOISY  
 SHEET 8 OF 43





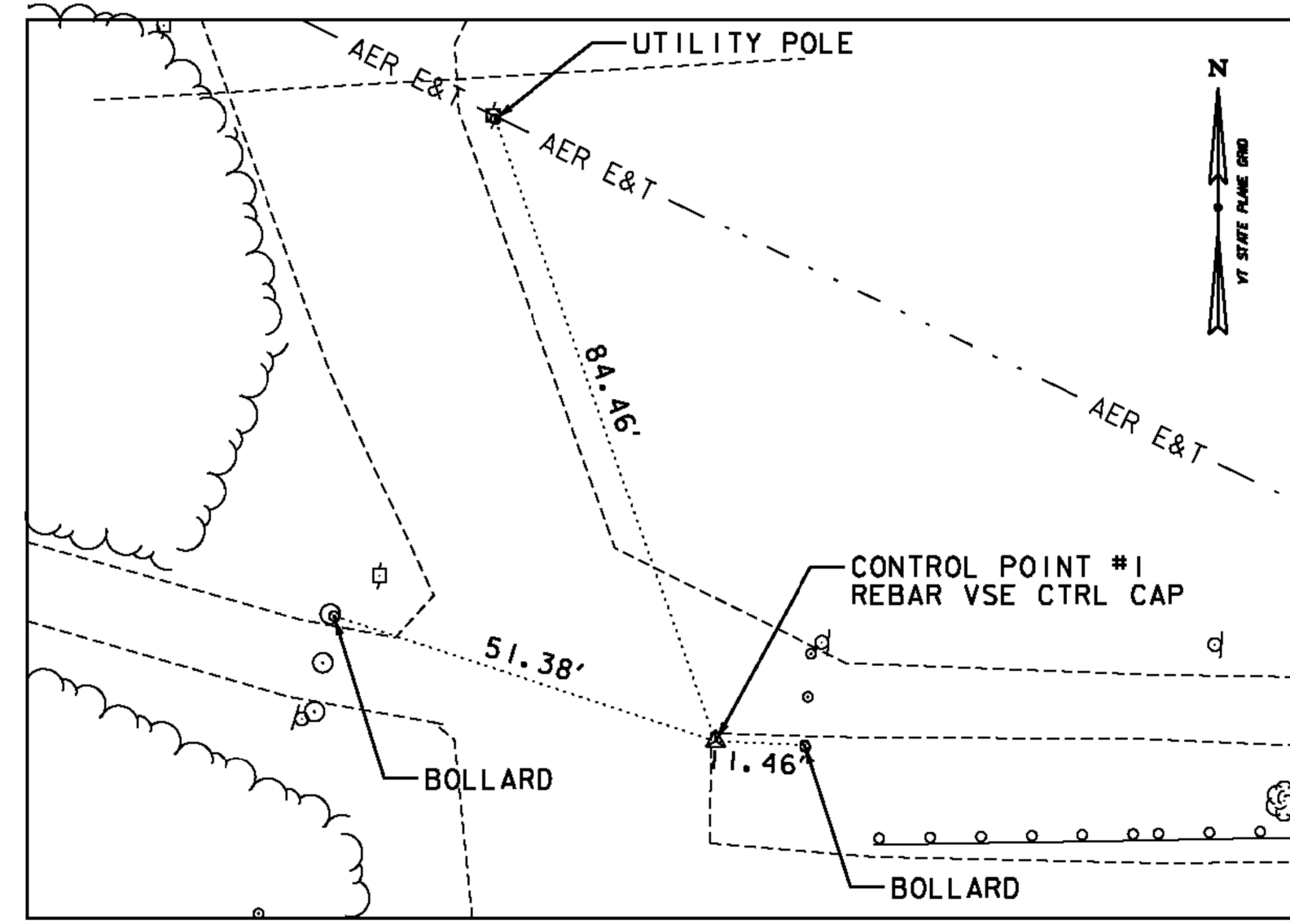


### LAYOUT POINT SUMMARY

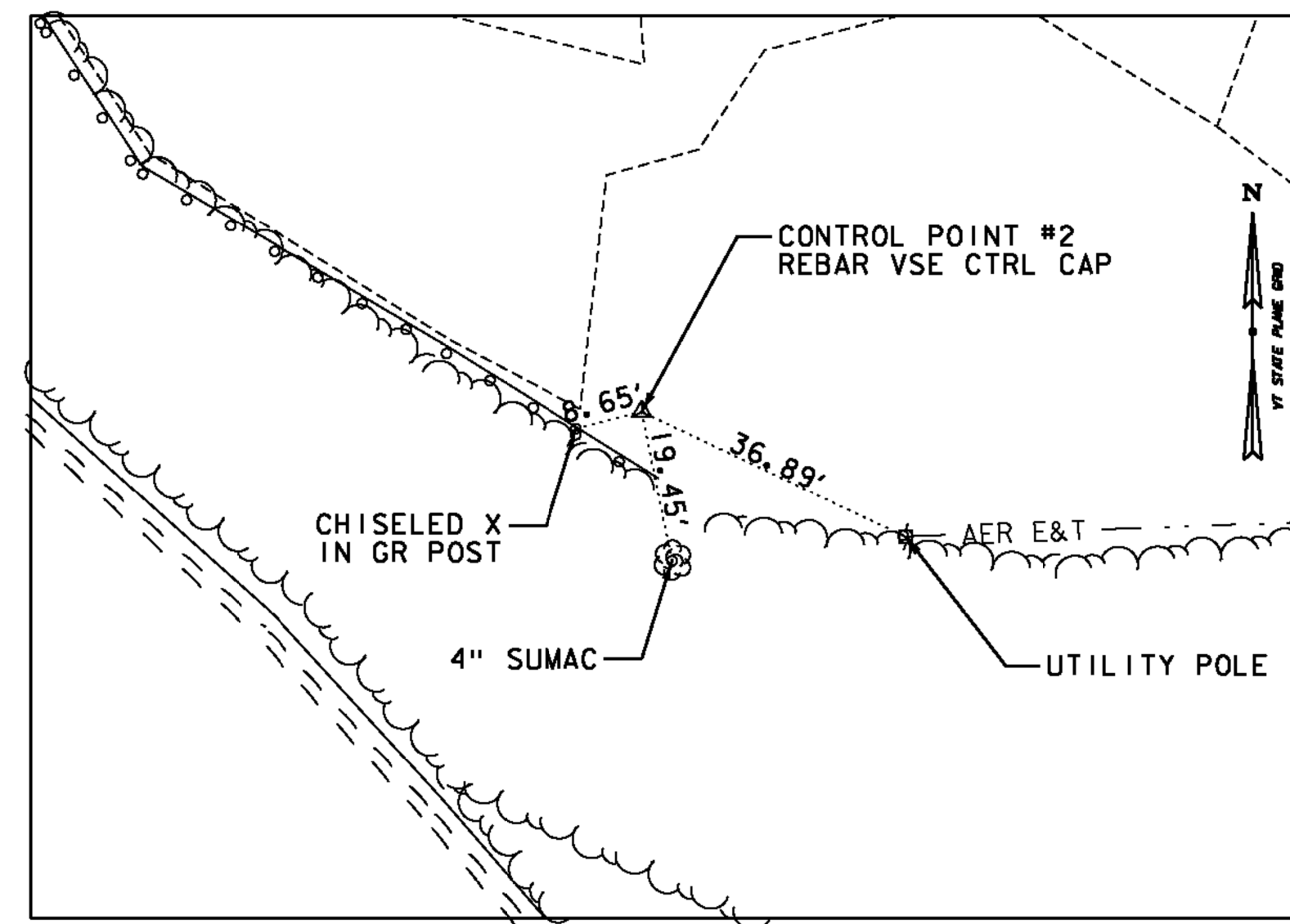
LEGEND: LP#X = LAYOUT POINT #X

LAYOUT POINT	DESCRIPTION	COORDINATES	STATION
1	PC OF 21' RADIUS	N 278592.41 E 1656799.65	BASELINE I STA. 101+50.00, 76.00' LT.
2	CENTER OF 21' RADIUS	N 278592.59 E 1656820.65	BASELINE I STA. 101+71.00, 76.00' LT.
3	PT OF 21' RADIUS	N 278613.59 E 1656820.47	BASELINE I STA. 101+71.00, 97.00' LT.
4	CORNER OF LOT	N 278615.30 E 1657018.47	BASELINE I STA. 103+69.00, 97.00' LT.
5	PC OF 10' RADIUS	N 278543.80 E 1657019.08	BASELINE I STA. 103+69.00, 25.50' LT.
6	CENTER OF 10' RADIUS	N 278543.89 E 1657029.08	BASELINE I STA. 103+79.00, 25.50' LT.
7	PCC OF 10' & 30' RADII	N 278533.89 E 1657028.94	BASELINE I STA. 103+78.78, 15.50' LT.
8	CENTER OF 30' RADIUS	N 278563.89 E 1657029.36	BASELINE I STA. 103+79.45, 45.50' LT.
9	PT OF 30' RADIUS	N 278564.30 E 1657059.36	BASELINE I STA. 104+09.45, 45.65' LT.
10	PC OF 30' RADIUS	N 278470.64 E 1657061.28	BASELINE I STA. 104+10.57, 48.00' RT.
11	CENTER OF 30' RADIUS	N 278472.90 E 1657031.37	BASELINE I STA. 103+80.67, 45.50' RT.
12	PCC OF 30' & 10' RADII	N 278502.77 E 1657028.60	BASELINE I STA. 103+78.16, 15.61' RT.
13	CENTER OF 10' RADIUS	N 278492.82 E 1657029.52	BASELINE I STA. 103+79.00, 25.57' RT.
14	PT OF 10' RADIUS	N 278492.73 E 1657019.52	BASELINE I STA. 103+69.00, 25.57' RT.
15	CORNER OF LOT	N 278421.30 E 1657020.13	BASELINE I STA. 103+69.00, 97.00' RT.
16	PC OF 33' RADIUS	N 278419.70 E 1656834.14	BASELINE I STA. 101+83.00, 97.00' RT.
17	CENTER OF 33' RADIUS	N 278452.70 E 1656833.86	BASELINE I STA. 101+83.00, 64.00' RT.
18	PT OF 33' RADIUS	N 278452.42 E 1656800.86	BASELINE I STA. 101+50.00, 64.00' RT.

### TRAVERSE TIES



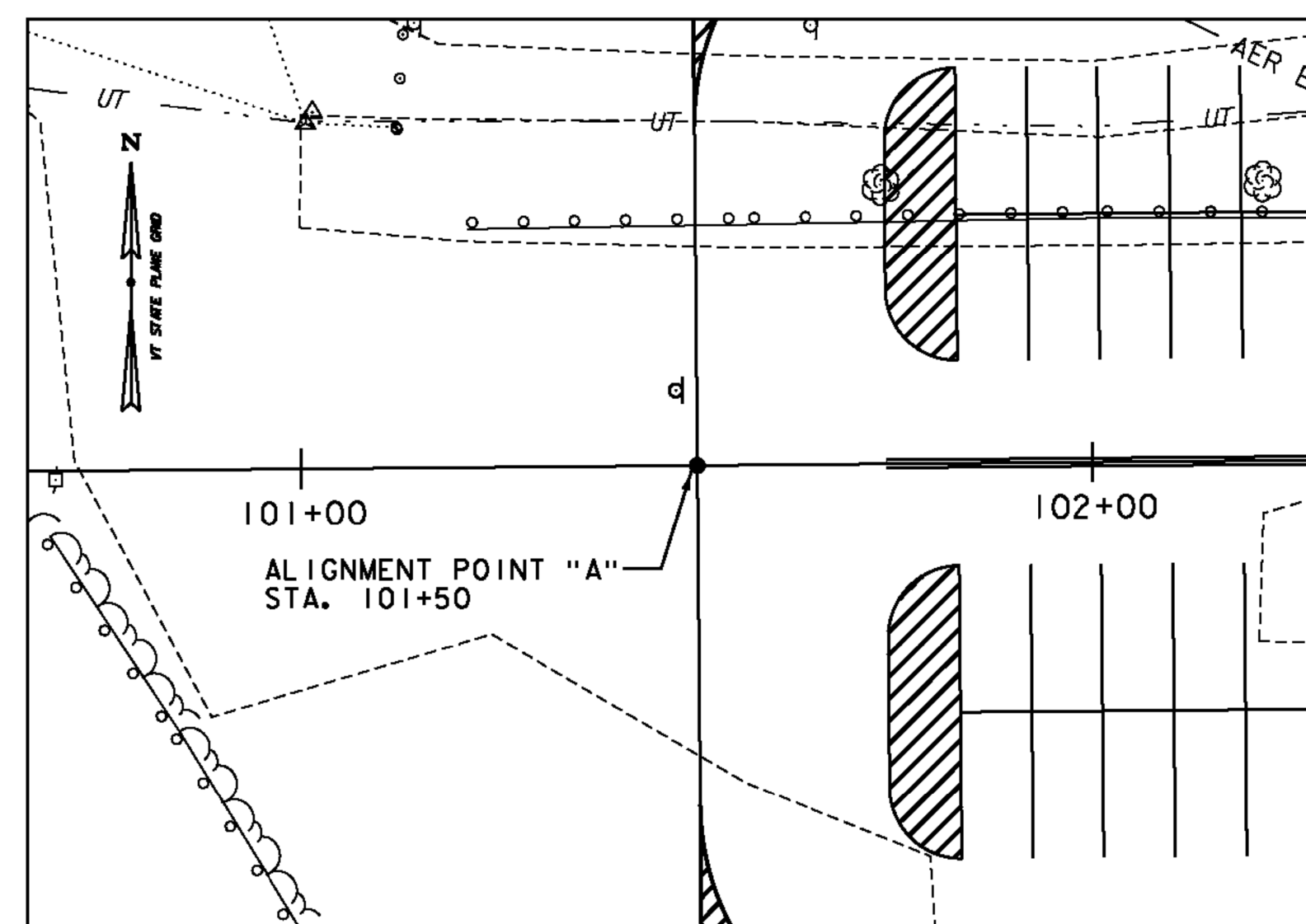
CONTROL POINT #1



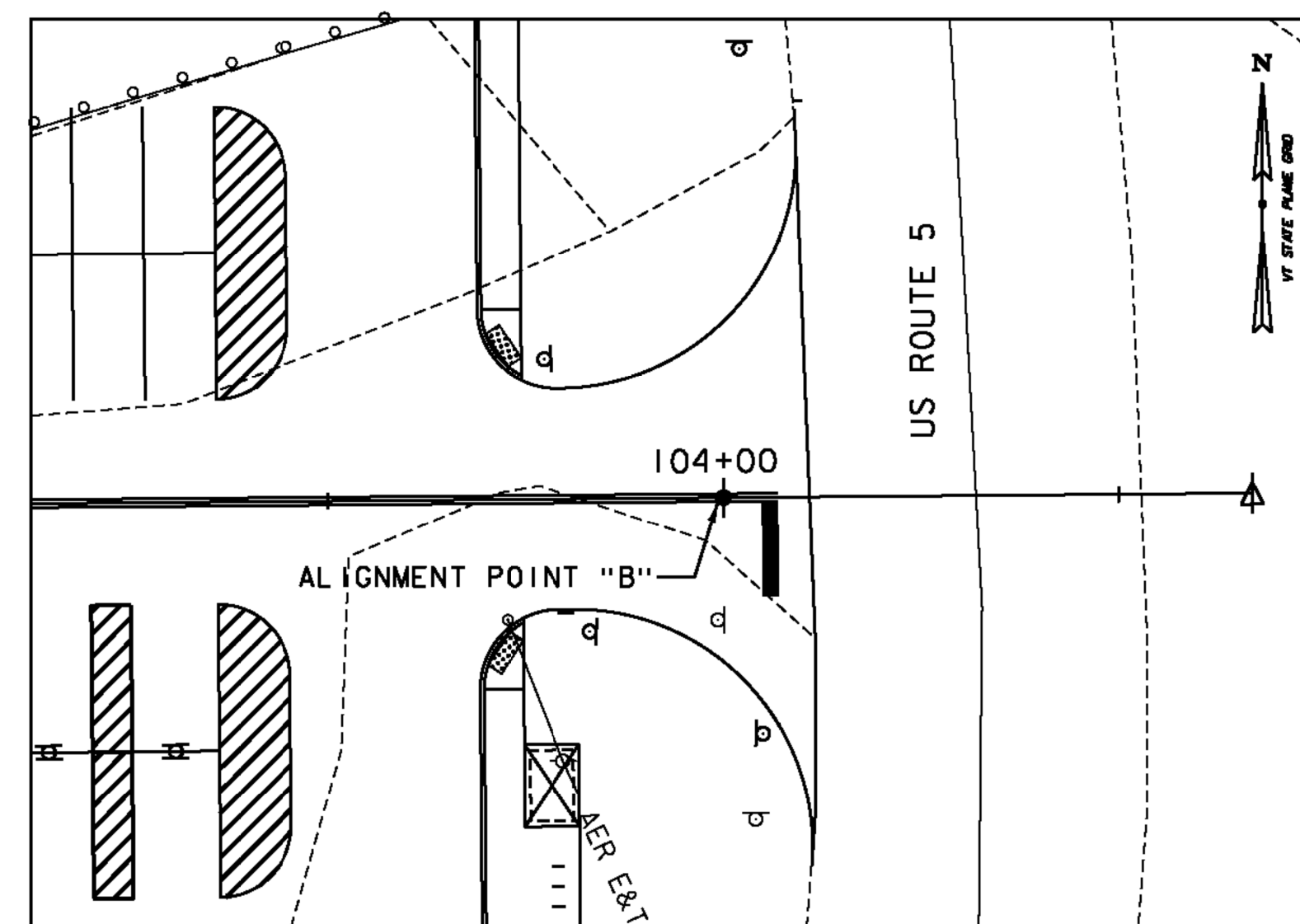
CONTROL POINT #2

CONTROL POINTS			
POINT	NORTHING	EASTING	ELEVATION
1	278559.697'	1656750.806'	308.85'
2	278399.643'	<del>165831.06'</del> 1656831.061'	312.85'

### ALIGNMENT TIES



ALIGNMENT POINT A



ALIGNMENT POINT B

ALIGNMENT POINTS				
POINT	NORTHING	EASTING	STATION	ELEVATION
A	278516.416'	1656800.309'	101+50.00	311.97'
B	278518.567'	1657050.299'	104+00.00	313.72'

DATUM  
 VERTICAL NAVD 88  
 HORIZONTAL NAD 83 (1996)  
 ADJUSTMENT none

PROJECT NAME: SPRINGFIELD  
 PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09k250+tie.dgn  
 PROJECT LEADER: G. SANTY  
 DESIGNED BY: I. MAYNARD  
 SURVEY CONTROL AND TIES

PLOT DATE: 6/25/2014  
 DRAWN BY: I. MAYNARD  
 CHECKED BY: M. FOISY  
 SHEET 11 OF 43



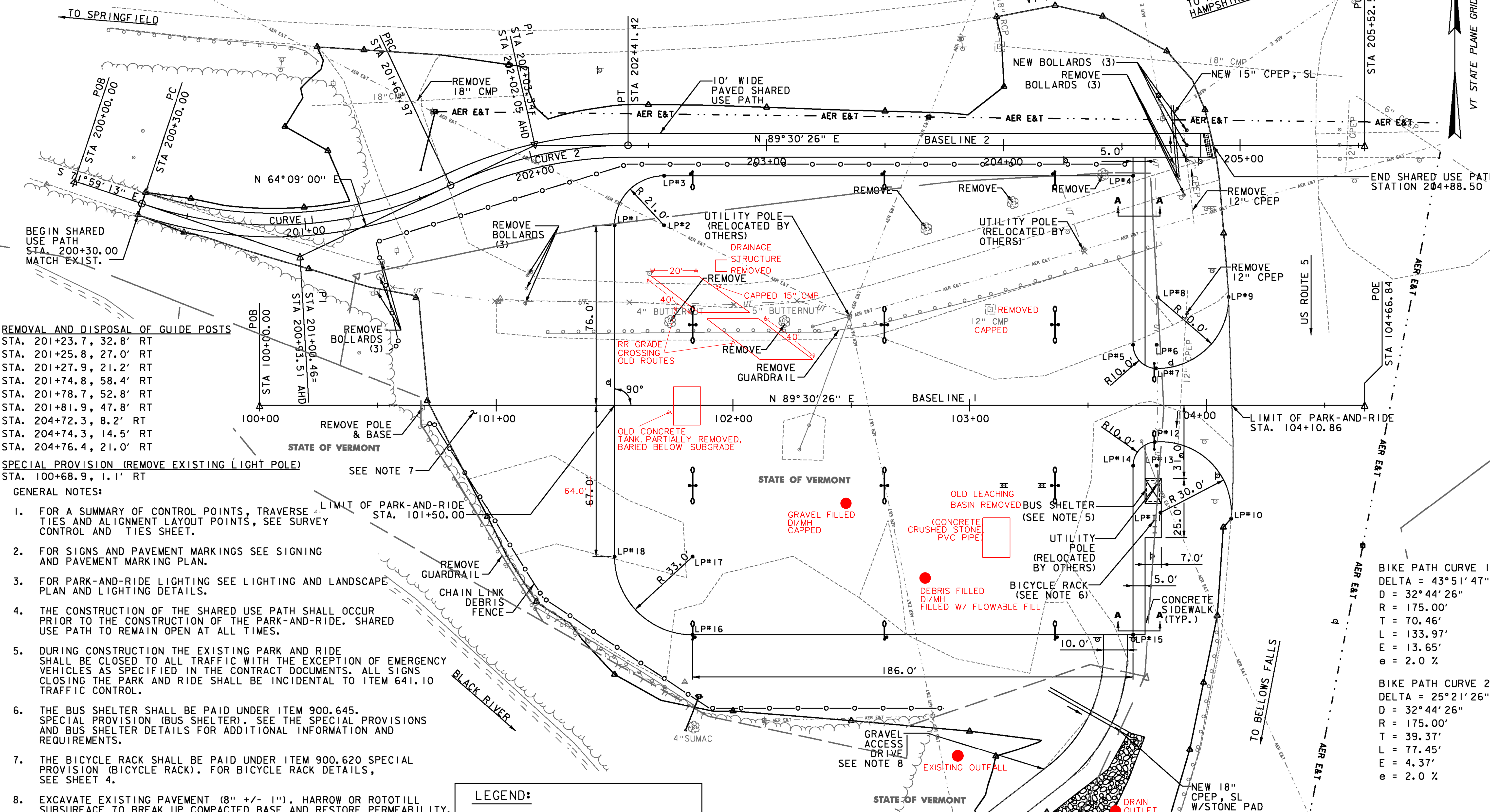
PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH  
 STA. 103+69.0, 104.8', LT - 103+74.0, 16.8' LT  
 STA. 103+69.0, 97.0', RT - 103+74.0, 16.9' RT  
 STA. 204+86.4, @

DETECTABLE WARNING SURFACE  
 STA. 204+86.4, @

CHAIN-LINK FENCE, 4 FT  
 STA. 100+73.2, 7.0' RT - 102+89.1, 128.0' RT

BOLLARDS  
 STA. 204+77.4, 6.3' RT  
 STA. 204+77.4, 6.3' LT  
 STA. 204+77.4, @

REMOVAL AND DISPOSAL OF GUARDRAIL  
 STA. 100+68.2, 8.4' RT - 101+83.9, 127.2' RT  
 STA. 101+21.1, 30.2' LT - 103+81.4, 67.8' LT



REMOVAL AND DISPOSAL OF GUIDE POSTS  
 STA. 201+23.7, 32.8' RT  
 STA. 201+25.8, 27.0' RT  
 STA. 201+27.9, 21.2' RT  
 STA. 201+74.8, 58.4' RT  
 STA. 201+78.7, 52.8' RT  
 STA. 201+81.9, 47.8' RT  
 STA. 204+72.3, 8.2' RT  
 STA. 204+74.3, 14.5' RT  
 STA. 204+76.4, 21.0' RT

SPECIAL PROVISION (REMOVE EXISTING LIGHT POLE)  
 STA. 100+68.9, 1.1' RT

GENERAL NOTES:

- FOR A SUMMARY OF CONTROL POINTS, TRAVERSE TIES AND ALIGNMENT LAYOUT POINTS, SEE SURVEY CONTROL AND TIES SHEET.
- FOR SIGNS AND PAVEMENT MARKINGS SEE SIGNING AND PAVEMENT MARKING PLAN.
- FOR PARK-AND-RIDE LIGHTING SEE LIGHTING AND LANDSCAPE PLAN AND LIGHTING DETAILS.
- THE CONSTRUCTION OF THE SHARED USE PATH SHALL OCCUR PRIOR TO THE CONSTRUCTION OF THE PARK-AND-RIDE. SHARED USE PATH TO REMAIN OPEN AT ALL TIMES.
- DURING CONSTRUCTION THE EXISTING PARK AND RIDE SHALL BE CLOSED TO ALL TRAFFIC WITH THE EXCEPTION OF EMERGENCY VEHICLES AS SPECIFIED IN THE CONTRACT DOCUMENTS. ALL SIGNS CLOSING THE PARK AND RIDE SHALL BE INCIDENTAL TO ITEM 641.10 TRAFFIC CONTROL.
- THE BUS SHELTER SHALL BE PAID UNDER ITEM 900.645. SPECIAL PROVISION (BUS SHELTER). SEE THE SPECIAL PROVISIONS AND BUS SHELTER DETAILS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- THE BICYCLE RACK SHALL BE PAID UNDER ITEM 900.620 SPECIAL PROVISION (BICYCLE RACK). FOR BICYCLE RACK DETAILS, SEE SHEET 4.
- EXCAVATE EXISTING PAVEMENT (8" +/- 1"). HARROW OR ROTOTILL SUBSURFACE TO BREAK UP COMPACTED BASE AND RESTORE PERMEABILITY. GRADE TO DRAIN (INCIDENTAL TO ITEM 203.28). PLACE 4" OF TOPSOIL AND SEED, FERTILIZE, LIME AND MULCH PER SEEDING FORMULA ON TYPICAL SECTIONS SHEET 2.
- GRAVEL ACCESS DRIVE TO RECEIVE THREE INCHES OF ITEM 401.10 AGGREGATE SURFACE COURSE OVER 18 INCHES OF ITEM 301.35 SUBBASE OF DENSE GRADED CRUSHED STONE. ALL EXCAVATION TO BE PAID UNDER ITEM 203.15 COMMON EXCAVATION.
- FOR SECTION A-A, SEE SHEET 2.

**LEGEND:**

	LIGHT POLE
	SIGN POSTS
	AERIAL ELECTRIC & PHONE
	CHAIN LINK FENCE
	GATE

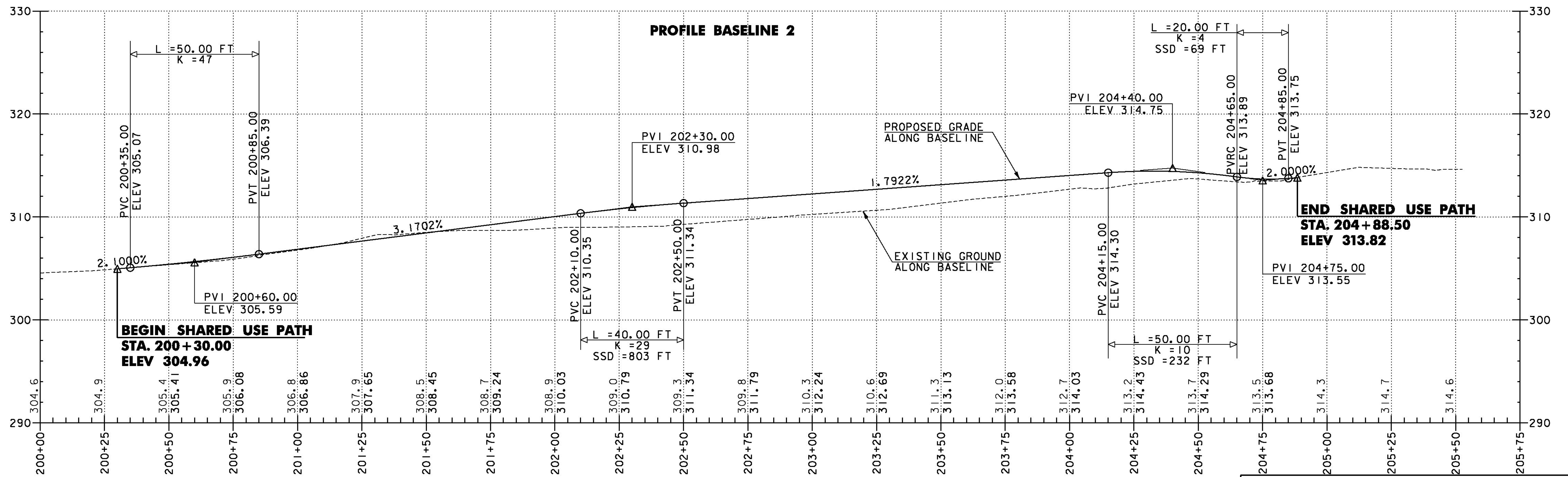
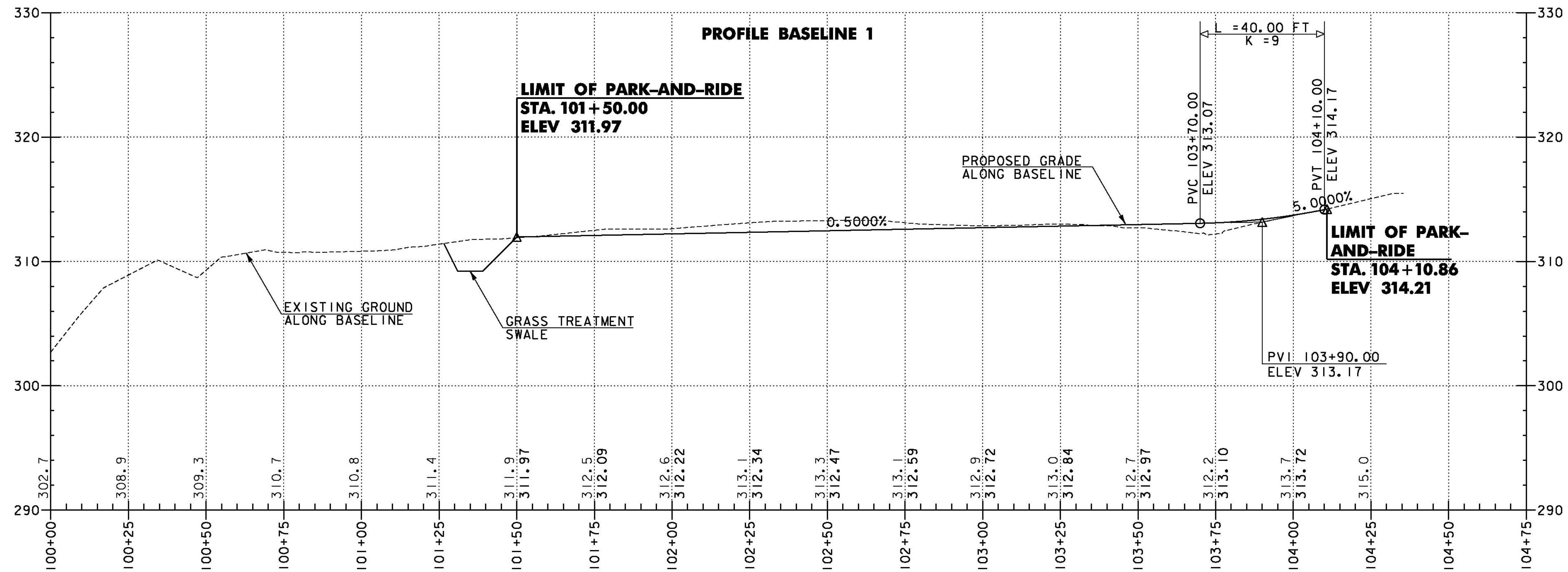
PROJECT NAME: SPRINGFIELD  
 PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09k250bdr.dgn  
 PROJECT LEADER: G. SANTY  
 DESIGNED BY: I. MAYNARD  
 LAYOUT PLAN

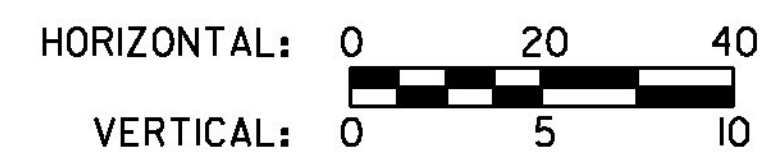
PLOT DATE: 7/22/2014  
 DRAWN BY: I. MAYNARD  
 CHECKED BY: M. FOISY  
 SHEET 12 OF 43

BIKE PATH CURVE 1  
 DELTA = 43°51'47"  
 D = 32°44'26"  
 R = 175.00'  
 T = 70.46'  
 L = 133.97'  
 E = 13.65'  
 e = 2.0 %

BIKE PATH CURVE 2  
 DELTA = 25°21'26"  
 D = 32°44'26"  
 R = 175.00'  
 T = 39.37'  
 L = 77.45'  
 E = 4.37'  
 e = 2.0 %



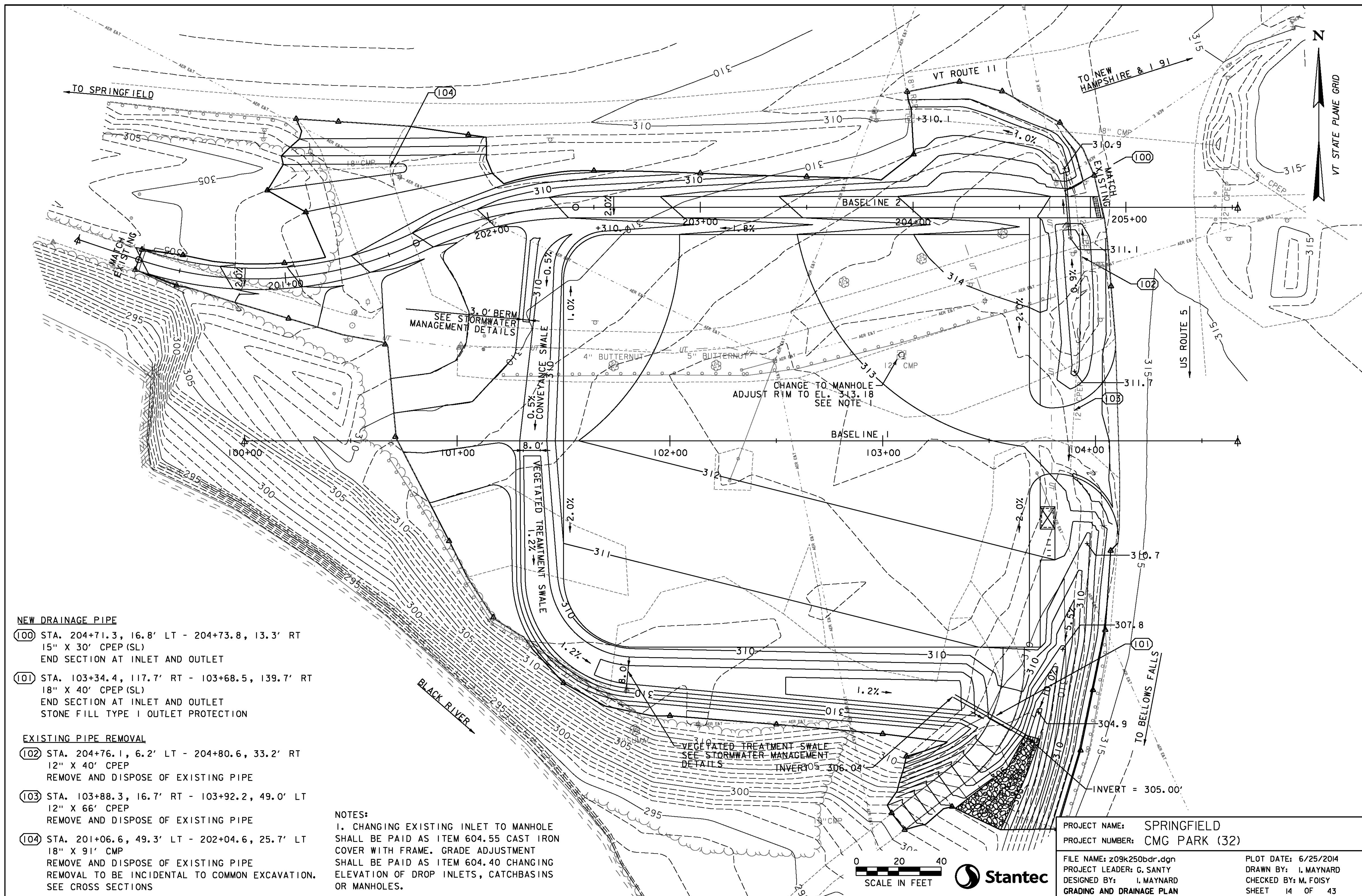
NOTE:  
ELEVATIONS SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG BASELINE.  
ELEVATIONS SHOWN TO THE NEAREST HUNDREDTH ARE FINISHED GRADE ALONG BASELINE.



PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09k250xs.dgn  
PROJECT LEADER: G. SANTY  
DESIGNED BY: I. MAYNARD  
PROFILE SHEET

PLOT DATE: 6/25/2014  
DRAWN BY: I. MAYNARD  
CHECKED BY: M. FOISY  
SHEET 13 OF 43



**NEW DRAINAGE PIPE**

- (100) STA. 204+71.3, 16.8' LT - 204+73.8, 13.3' RT  
15" X 30' CPEP (SL)  
END SECTION AT INLET AND OUTLET
- (101) STA. 103+34.4, 117.7' RT - 103+68.5, 139.7' RT  
18" X 40' CPEP (SL)  
END SECTION AT INLET AND OUTLET  
STONE FILL TYPE I OUTLET PROTECTION

**EXISTING PIPE REMOVAL**

- (102) STA. 204+76.1, 6.2' LT - 204+80.6, 33.2' RT  
12" X 40' CPEP  
REMOVE AND DISPOSE OF EXISTING PIPE
- (103) STA. 103+88.3, 16.7' RT - 103+92.2, 49.0' LT  
12" X 66' CPEP  
REMOVE AND DISPOSE OF EXISTING PIPE
- (104) STA. 201+06.6, 49.3' LT - 202+04.6, 25.7' LT  
18" X 91' CMP  
REMOVE AND DISPOSE OF EXISTING PIPE  
REMOVAL TO BE INCIDENTAL TO COMMON EXCAVATION.  
SEE CROSS SECTIONS

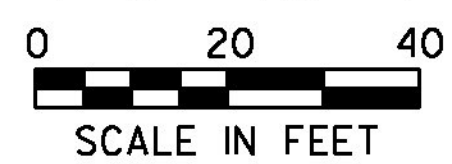
**NOTES:**

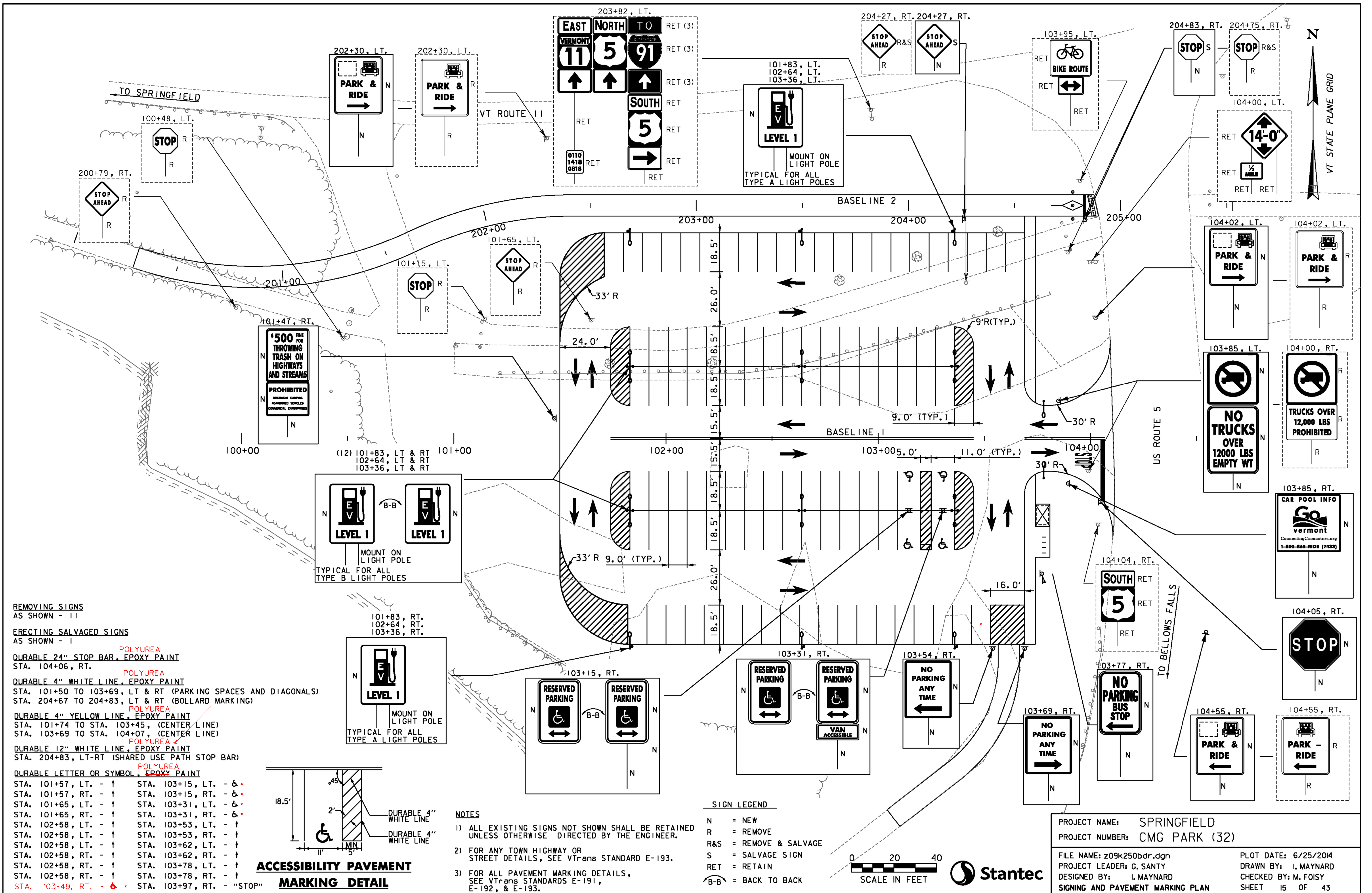
1. CHANGING EXISTING INLET TO MANHOLE SHALL BE PAID AS ITEM 604.55 CAST IRON COVER WITH FRAME. GRADE ADJUSTMENT SHALL BE PAID AS ITEM 604.40 CHANGING ELEVATION OF DROP INLETS, CATCHBASINS OR MANHOLES.

PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09k250bdr.dgn  
PROJECT LEADER: G. SANTY  
DESIGNED BY: I. MAYNARD  
GRADING AND DRAINAGE PLAN

PLOT DATE: 6/25/2014  
DRAWN BY: I. MAYNARD  
CHECKED BY: M. FOISY  
SHEET 14 OF 43





REMOVING SIGNS  
AS SHOWN - 11

ERECTING SALVAGED SIGNS  
AS SHOWN - 1

DURABLE 24" STOP BAR, EPOXY PAINT  
STA. 104+06, RT.

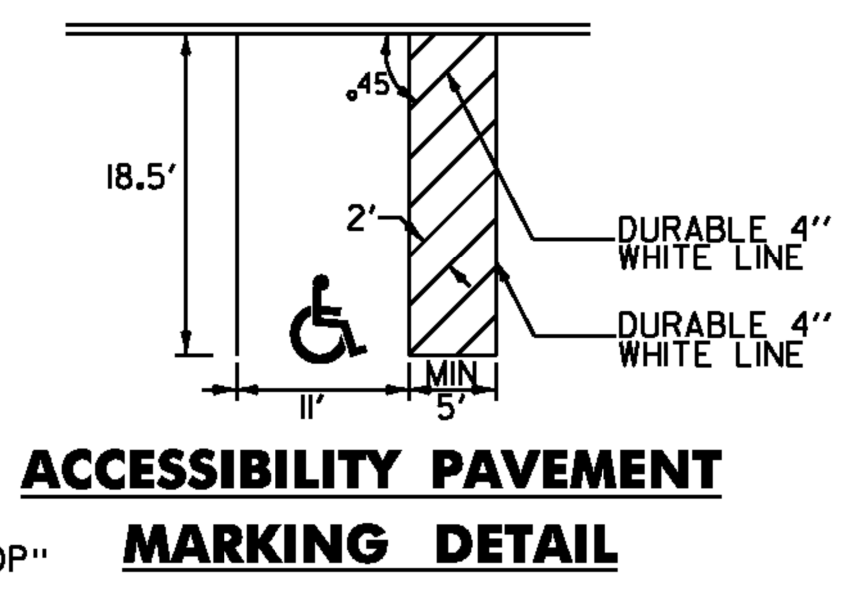
DURABLE 4" WHITE LINE, EPOXY PAINT  
STA. 101+50 TO 103+69, LT & RT (PARKING SPACES AND DIAGONALS)  
STA. 204+67 TO 204+83, LT & RT (BOLLARD MARKING)

DURABLE 4" YELLOW LINE, EPOXY PAINT  
STA. 101+74 TO STA. 103+45, (CENTER LINE)  
STA. 103+69 TO STA. 104+07, (CENTER LINE)

DURABLE 12" WHITE LINE, EPOXY PAINT  
STA. 204+83, LT-RT (SHARED USE PATH STOP BAR)

DURABLE LETTER OR SYMBOL, EPOXY PAINT

STA. 101+57, LT. - †	STA. 103+15, LT. - †
STA. 101+57, RT. - †	STA. 103+15, RT. - †
STA. 101+65, LT. - †	STA. 103+31, LT. - †
STA. 101+65, RT. - †	STA. 103+31, RT. - †
STA. 102+58, LT. - †	STA. 103+53, LT. - †
STA. 102+58, LT. - †	STA. 103+53, RT. - †
STA. 102+58, RT. - †	STA. 103+62, LT. - †
STA. 102+58, RT. - †	STA. 103+62, RT. - †
STA. 102+58, RT. - †	STA. 103+78, LT. - †
STA. 102+58, RT. - †	STA. 103+78, RT. - †
STA. 102+58, RT. - †	STA. 103+78, RT. - †
STA. 103+49, RT. - †	STA. 103+97, RT. - "STOP"

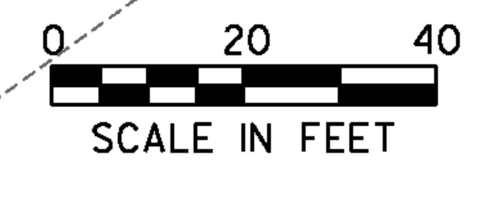


**NOTES**

- 1) ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- 2) FOR ANY TOWN HIGHWAY OR STREET DETAILS, SEE VTRANS STANDARD E-193.
- 3) FOR ALL PAVEMENT MARKING DETAILS, SEE VTRANS STANDARDS E-191, E-192, & E-193.

**SIGN LEGEND**

N = NEW  
R = REMOVE  
R&S = REMOVE & SALVAGE  
S = SALVAGE SIGN  
RET = RETAIN  
B-B = BACK TO BACK



PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09k250bdr.dgn  
PROJECT LEADER: G. SANTY  
DESIGNED BY: I. MAYNARD  
SIGNING AND PAVEMENT MARKING PLAN

PLOT DATE: 6/25/2014  
DRAWN BY: I. MAYNARD  
CHECKED BY: M. FOISY  
SHEET 15 OF 43

\*LETTER OR SYMBOL, WATERBORNE PAINT

\*ADDED 1 HANDICAP STALL, REF. COD \*01 FOR REVISED SHEET

# TRAFFIC SIGN SUMMARY SHEET 01

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST. POST RETAIN	NO. OF SALVAGED POSTS	NEW SIGN POSTS														REMARKS	SIGN DETAIL								
		E A	WIDTH (ft)	HEIGHT (ft)	"A"	"B"	SALV SIGN			SALV TIS	FLANGED CHANNEL			SQUARE STEEL (in)				TUBULAR ALUMINUM Ø (in)			TUBULAR STEEL Ø (in)				W-SHAPE STEEL		DETAIL IN SHSM BOOK	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER				
											1.2	2.0	3.0	1.75	2.0	2.5	ANCHOR	SLEEVE	3.0	4.0	4.0 MOD	FOUND-ATION	3.0		3.5	4.0				5.0	FTG. SIZE	WEIGHT	POST SIZE
<b>SPRINGFIELD</b>																																	
<b>BASELINE 1</b>																																	
101+47, RT LT		1	24	30	5.00				1																				SIGN ID CODE VR-023b			E-144	
		1	30	24	5.00																								SIGN ID CODE VR-032 "PROHIBITED" SIGN TO BE INSTALLED BELOW SIGN VR-023b.	19			
101+83, LT		1	24	32	5.33																								INSTALL SIGN ON LIGHT POLE	4			
101+83, LT&RT		4	24	32	21.33																								INSTALL SIGNS ON LIGHT POLE	4			
101+83, RT		1	24	32	5.33																								INSTALL SIGN ON LIGHT POLE	4			
102+64, LT		1	24	32	5.33																								INSTALL SIGN ON LIGHT POLE	4			
102+64, LT&RT		4	24	32	21.33																								INSTALL SIGNS ON LIGHT POLE	4			
102+64, RT		1	24	32	5.33																								INSTALL SIGN ON LIGHT POLE	4			
<p>FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."</p>																																	
<b>TOTALS</b>		SF	SF	EA.	SF					FT	FT	FT	FT	FT	FT	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA		
		73.98								15																							

PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)  
FILE NAME: z09k250frm.dgn  
PROJECT LEADER: G. SANTY  
DESIGNED BY: I. MAYNARD  
TRAFFIC SIGN SUMMARY SHEET 1

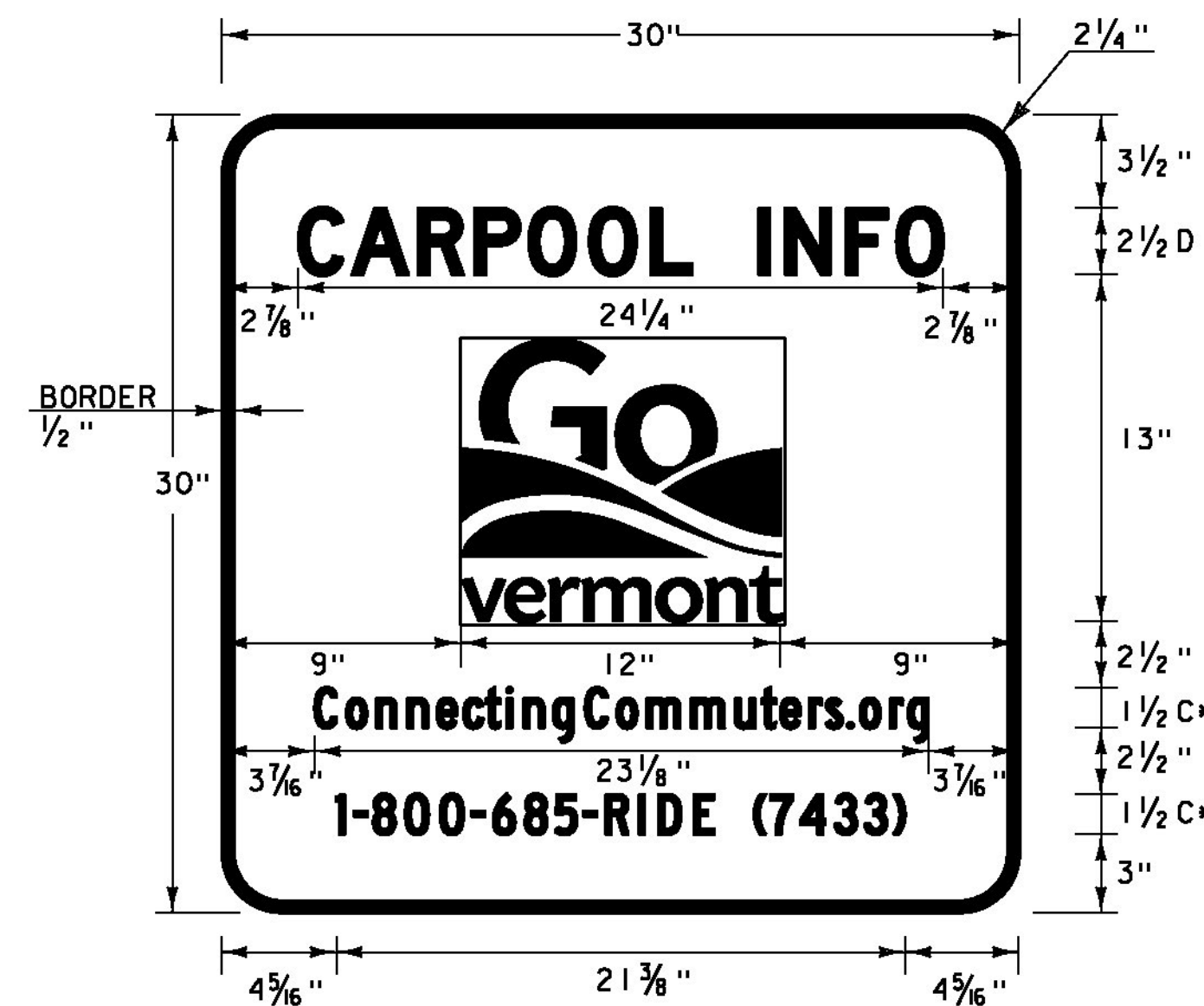
PLOT DATE: 6/25/2014  
DRAWN BY: I. MAYNARD  
CHECKED BY: M. FOISY  
SHEET 16 OF 43





# TRAFFIC SIGN SUMMARY SHEET 03

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST. POST RETAIN	NO. OF SALVAGED POSTS	NEW SIGN POSTS															REMARKS	SIGN DETAIL						
		E A	WIDTH (ft)	HEIGHT (ft)	"A"	"B"	SALV SIGN			SALV TIS	FLANGED CHANNEL			SQUARE STEEL (ft)			TUBULAR ALUMINUM Ø (ft)			TUBULAR STEEL Ø (ft)				W-SHAPE STEEL			DETAIL IN SHSM BOOK	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER			
											1.2	2.0	3.0	1.75	2.0	2.5	3.0	4.0	4.0 MOD	FOUND-ATION	3.0	3.5	4.0	5.0		FTG. SIZE				WEIGHT	POST SIZE	
																										lb/ft						lb/ft
<b>SPRINGFIELD</b>																																
<b>BASELINE 2</b>																																
103+85, RT		I	30	30	6.25				I				15		X												SEE SIGN DETAILS			19		
103+85, LT		I	24	24	4.00				I				15		X												SIGN ID CODE R5-2			X		
		I	24	36	6.00																						SIGN ID CODE R12-3			X		
104+02, LT		I	30	36	7.50				I				15		X												SEE SIGN DETAILS			19		
104+05, RT		I	30	30	6.25				I				15		X												SIGN ID CODE R1-1			X		
104+55, RT		I	30	36	7.50				I				15		X												SEE SIGN DETAILS			19		
202+30, LT		I	30	36	7.50				I				15		X												SEE SIGN DETAILS			19		
204+27, RT		I	18	18					I				15		X												SIGN ID CODE W3-1			X		
204+83, RT		I	18	18					I				15		X												SIGN ID CODE R1-1			X		
104+00, L.T.																																
	TSS SHEET 1 SUBTOTALS				73.98								15																			
	TSS SHEET 2 SUBTOTALS				43.24	44.74							75																			
	TSS SHEET 3 SUBTOTALS				45.00		2.4						120																			
	PROJECT SUBTOTALS				162.22	163.72	2.4						210																			
	ROUNDING				0.78								-																			
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."		<b>TOTALS</b>		SF	SF	EA.	SF			FT	FT	FT	FT	FT	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	
					163	163.72	2.4						210																			
							</																									



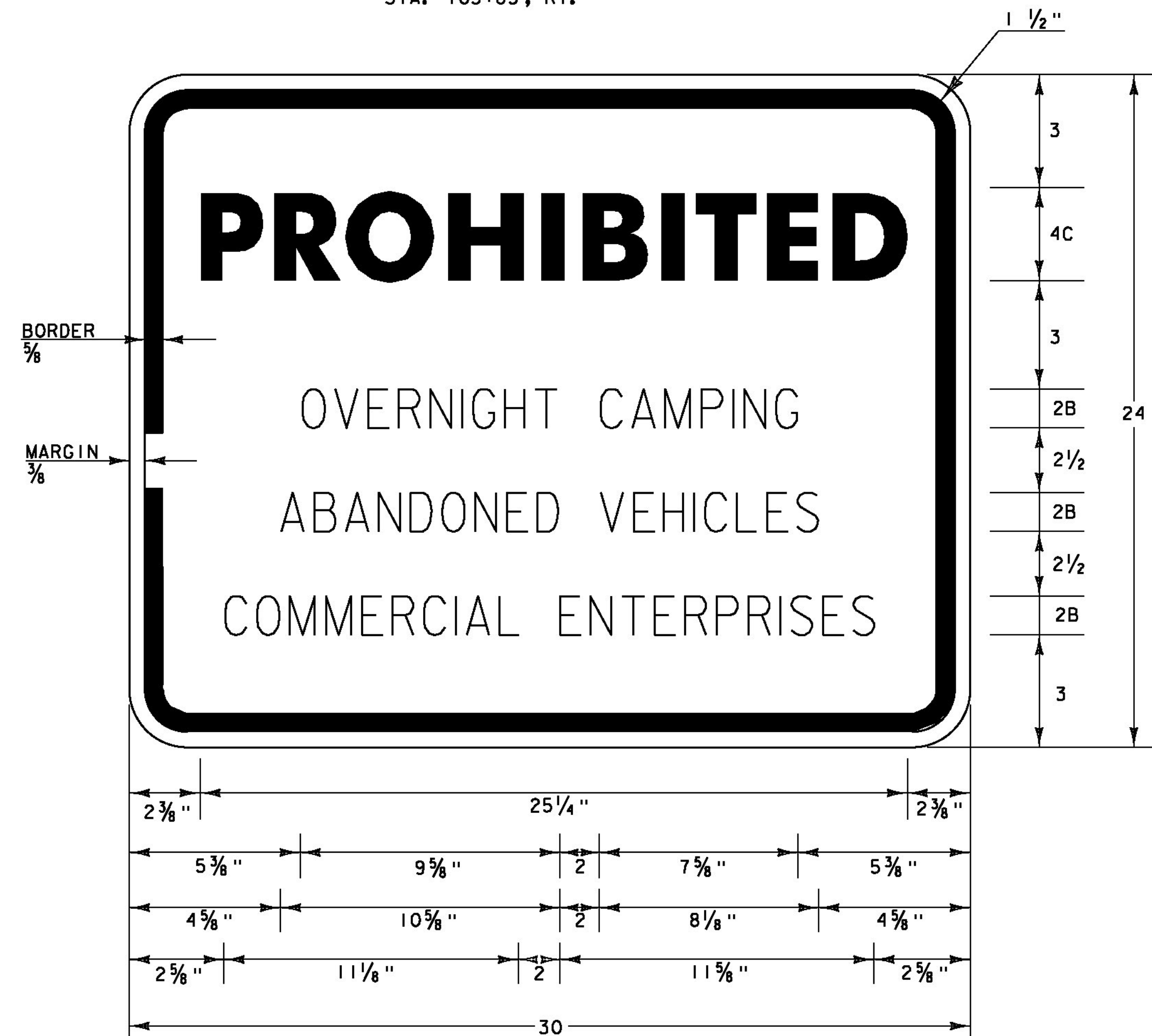
**WHITE BORDER AND TEXT (RETROREFLECTIVE)  
(MINIMUM TYPE IX) WITH BLUE BACKGROUND  
(RETROREFLECTIVE) (MINIMUM TYPE III)  
SEE VTrans STANDARD E-131 FOR MATERIALS**

NOTE: THE "GO VERMONT" LOGO WILL BE PROVIDED TO THE CONTRACTOR BY VAOT IN JPEG FORMAT.

•INCREASE SPACING BY 60%

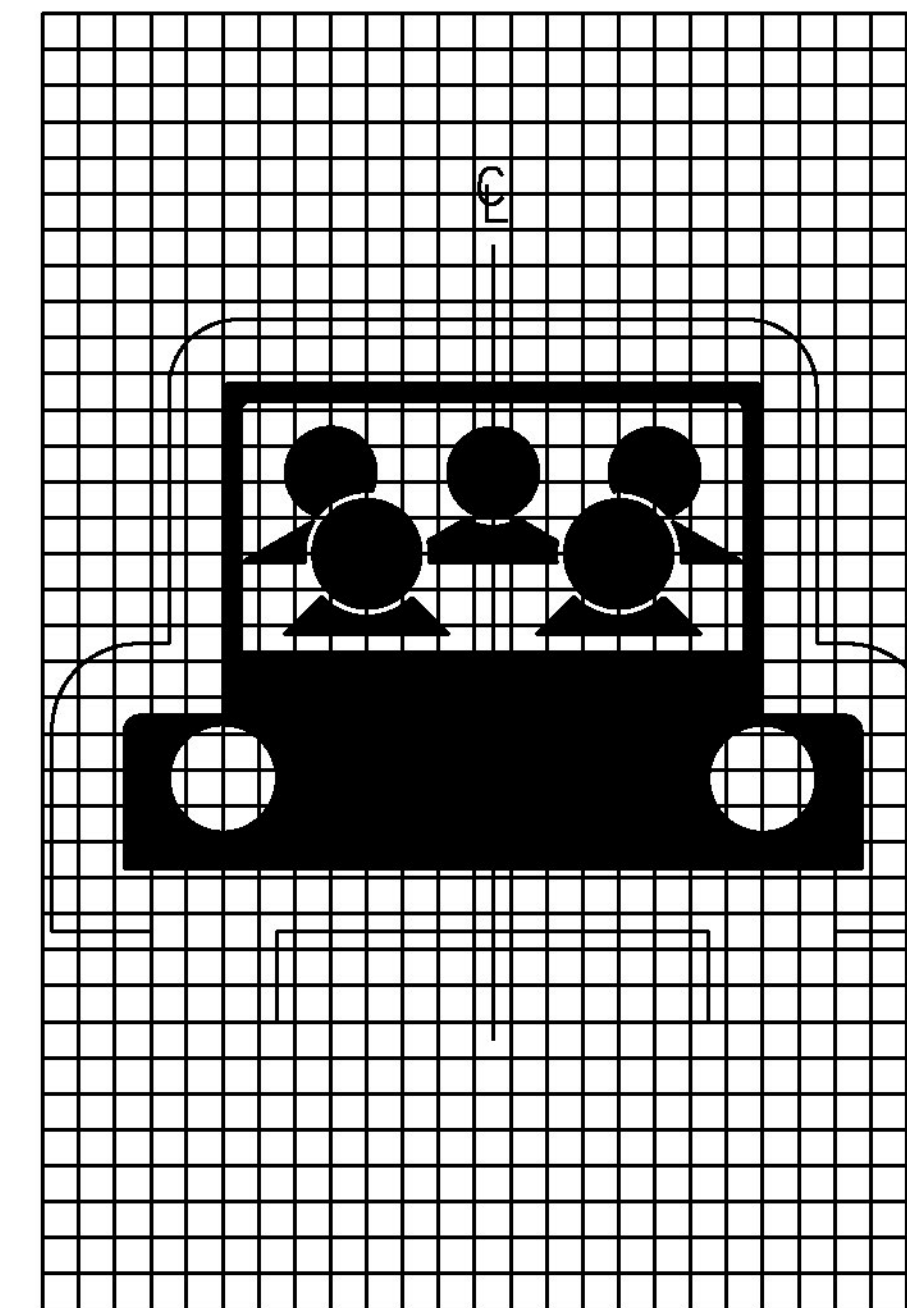
**LOCATIONS**

STA. 103+85, RT.

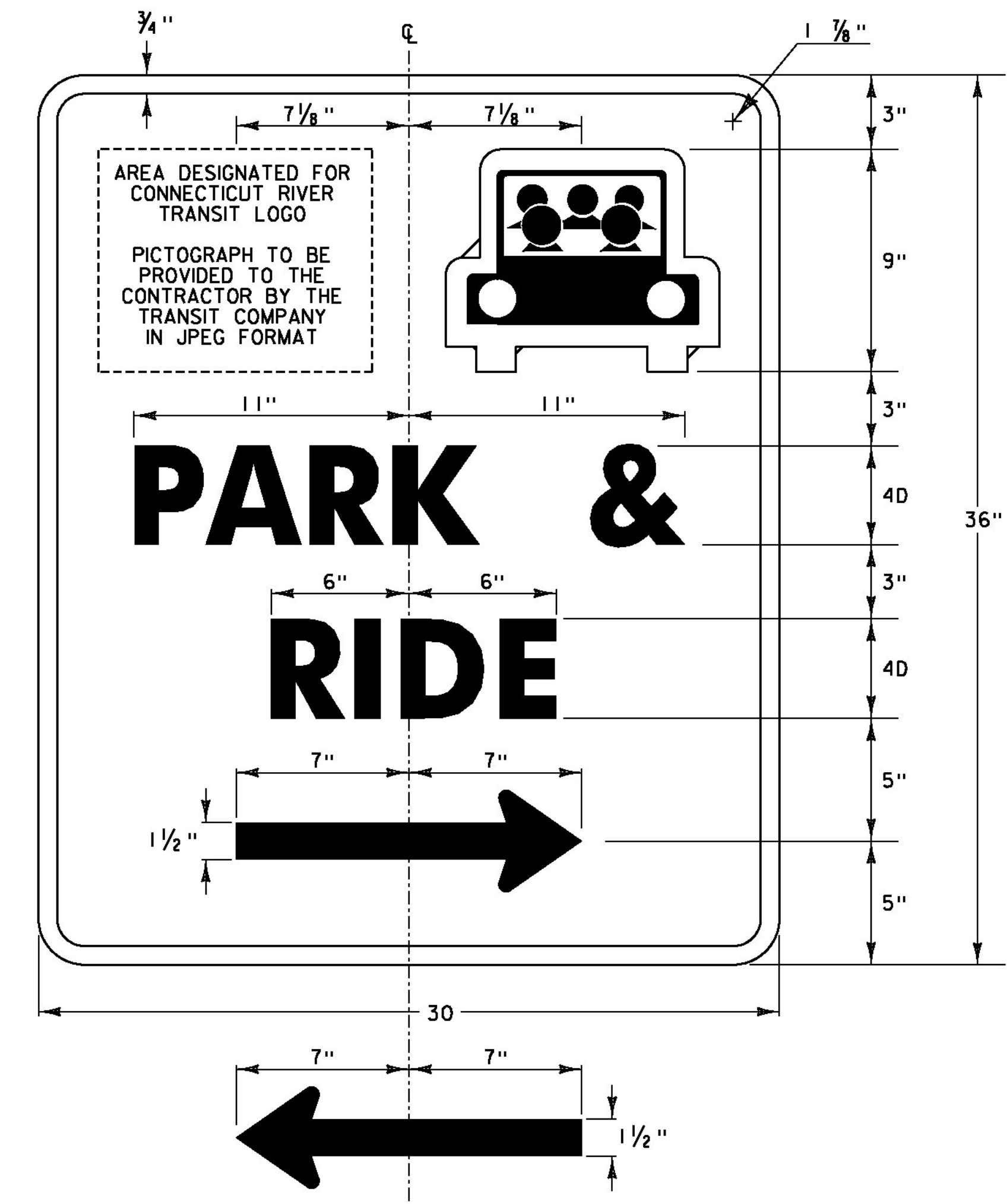


**VR-032A  
LOCATIONS**

STA. 101+47, RT



SYMBOL DESIGN  
1 SQUARE = 1/2"



**D4-2  
WHITE (REFL.) LEGEND, ARROW & BORDER  
WHITE & GREEN SYMBOL  
GREEN (REFL.) BACKGROUND  
SEE VTrans STANDARD E-131 FOR MATERIALS**

**LOCATIONS**

STA. 104+02, LT.  
STA. 104+55, RT.  
STA. 202+30, LT.



PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09k250+yp.dgn  
PROJECT LEADER: G. SANTY  
DESIGNED BY: I. MAYNARD  
SIGN DETAILS

PLOT DATE: 6/25/2014  
DRAWN BY: I. MAYNARD  
CHECKED BY: M. FOISY  
SHEET 19 OF 43

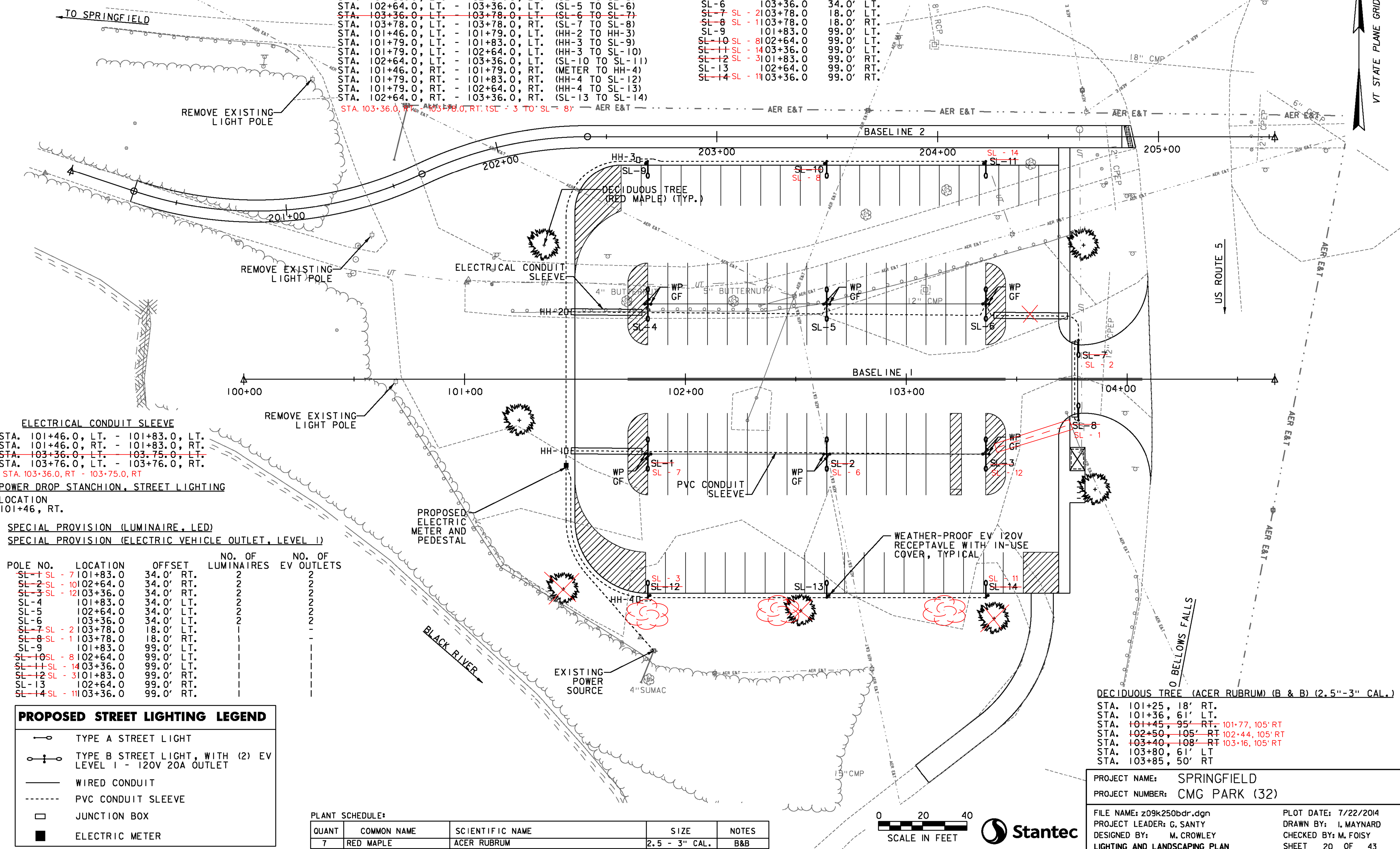
WIRED CONDUIT (3") (PVC) (SCH 80)  
 STA. 101+46.0, RT. - 101+85.7, RT. (SOURCE TO METER)

WIRED CONDUIT (2") (PVC) (SCH 80)  
 STA. 101+46.0, RT. - 101+46.0, RT. (2) (METER TO HH-1)  
 STA. 101+46.0, RT. - 101+83.0, RT. (HH-1 TO SL-1)  
 STA. 101+83.0, RT. - 102+64.0, RT. (SL-1 TO SL-2)  
 STA. 102+64.0, RT. - 103+36.0, RT. (SL-2 TO SL-3)  
 STA. 101+46.0, RT. - 101+46.0, LT. (HH-1 TO HH-2)  
 STA. 101+46.0, LT. - 101+83.0, LT. (HH-2 TO SL-4)  
 STA. 101+83.0, LT. - 102+64.0, LT. (SL-4 TO SL-5)  
 STA. 102+64.0, LT. - 103+36.0, LT. (SL-5 TO SL-6)  
 STA. 103+36.0, LT. - 103+78.0, LT. (SL-6 TO SL-7)  
 STA. 103+78.0, LT. - 103+78.0, RT. (SL-7 TO SL-8)  
 STA. 101+46.0, LT. - 101+79.0, LT. (HH-2 TO HH-3)  
 STA. 101+79.0, LT. - 101+83.0, LT. (HH-3 TO SL-9)  
 STA. 101+79.0, LT. - 102+64.0, LT. (HH-3 TO SL-10)  
 STA. 102+64.0, LT. - 103+36.0, LT. (SL-10 TO SL-11)  
 STA. 101+46.0, RT. - 101+79.0, RT. (METER TO HH-4)  
 STA. 101+79.0, RT. - 101+83.0, RT. (HH-4 TO SL-12)  
 STA. 101+79.0, RT. - 102+64.0, RT. (HH-4 TO SL-13)  
 STA. 102+64.0, RT. - 103+36.0, RT. (SL-13 TO SL-14)  
 STA. 103+36.0, RT. - 103+78.0, RT. (SL-3 TO SL-8)

LIGHT POLE & LIGHT POLE BASE  
 POLE NO. LOCATION OFFSET LABEL  
 SL-1 SL-7 101+83.0 34.0' RT. ELECTRIC HH-1  
 SL-2 SL-10 102+64.0 34.0' RT. ELECTRIC HH-2  
 SL-3 SL-12 103+36.0 34.0' RT. ELECTRIC HH-3  
 SL-4 101+83.0 34.0' LT. ELECTRIC HH-4  
 SL-5 102+64.0 34.0' LT.  
 SL-6 103+36.0 34.0' LT.  
 SL-7 SL-2 103+78.0 18.0' LT.  
 SL-8 SL-1 103+78.0 18.0' RT.  
 SL-9 101+83.0 99.0' LT.  
 SL-10 SL-8 102+64.0 99.0' LT.  
 SL-11 SL-14 103+36.0 99.0' LT.  
 SL-12 SL-3 101+83.0 99.0' RT.  
 SL-13 102+64.0 99.0' RT.  
 SL-14 SL-11 103+36.0 99.0' RT.

JUNCTION BOX  
 LOCATION OFFSET  
 101+46.0 32.5' RT.  
 101+46.0 30.5' LT.  
 101+79.0 99.0' LT.  
 101+79.0 99.0' RT.

SPECIAL PROVISION (REMOVE EXISTING LIGHT POLE)  
 STA. 100+31.0, LT  
 STA. 100+58.0, LT  
 STA. 100+68.9, RT



ELECTRICAL CONDUIT SLEEVE  
 STA. 101+46.0, LT. - 101+83.0, LT.  
 STA. 101+46.0, RT. - 101+83.0, RT.  
 STA. 103+36.0, LT. - 103+75.0, LT.  
 STA. 103+76.0, LT. - 103+76.0, RT.  
 STA. 103+36.0, RT. - 103+75.0, RT.

POWER DROP STANCHION, STREET LIGHTING  
 LOCATION  
 101+46, RT.

SPECIAL PROVISION (LUMINAIRE, LED)  
 SPECIAL PROVISION (ELECTRIC VEHICLE OUTLET, LEVEL 1)

POLE NO.	LOCATION	OFFSET	NO. OF LUMINAIRES	NO. OF EV OUTLETS
SL-1	SL-7 101+83.0	34.0' RT.	2	2
SL-2	SL-10 102+64.0	34.0' RT.	2	2
SL-3	SL-12 103+36.0	34.0' RT.	2	2
SL-4	101+83.0	34.0' LT.	2	2
SL-5	102+64.0	34.0' LT.	2	2
SL-6	103+36.0	34.0' LT.	2	2
SL-7	SL-2 103+78.0	18.0' LT.	1	1
SL-8	SL-1 103+78.0	18.0' RT.	1	1
SL-9	101+83.0	99.0' LT.	1	1
SL-10	SL-8 102+64.0	99.0' LT.	1	1
SL-11	SL-14 103+36.0	99.0' LT.	1	1
SL-12	SL-3 101+83.0	99.0' RT.	1	1
SL-13	102+64.0	99.0' RT.	1	1
SL-14	SL-11 103+36.0	99.0' RT.	1	1

**PROPOSED STREET LIGHTING LEGEND**

- TYPE A STREET LIGHT
- TYPE B STREET LIGHT, WITH (2) EV LEVEL 1 - 120V 20A OUTLET
- WIRED CONDUIT
- PVC CONDUIT SLEEVE
- JUNCTION BOX
- ELECTRIC METER

PLANT SCHEDULE:

QUANT	COMMON NAME	SCIENTIFIC NAME	SIZE	NOTES
7	RED MAPLE	ACER RUBRUM	2.5 - 3" CAL.	B&B

DECIDUOUS TREE (ACER RUBRUM) (B & B) (2.5"-3" CAL.)  
 STA. 101+25, 18' RT.  
 STA. 101+36, 61' LT.  
 STA. 101+45, 95' RT. 101+77, 105' RT.  
 STA. 102+50, 105' RT. 102+44, 105' RT.  
 STA. 103+40, 108' RT. 103+16, 105' RT.  
 STA. 103+80, 61' LT.  
 STA. 103+85, 50' RT.

PROJECT NAME: SPRINGFIELD  
 PROJECT NUMBER: CMG PARK (32)  
 FILE NAME: z09k250bdr.dgn  
 PROJECT LEADER: G. SANTY  
 DESIGNED BY: M. CROWLEY  
 LIGHTING AND LANDSCAPING PLAN  
 PLOT DATE: 7/22/2014  
 DRAWN BY: I. MAYNARD  
 CHECKED BY: M. FOISY  
 SHEET 20 OF 43



## GENERAL SITE LIGHT NOTES

### CONCRETE BASES

WHEN CONCRETE BASES ARE INSTALLED IN SLOPING GROUND, THE GREATEST EXPOSED HEIGHT TO KEEP ALL OF THE TOP ABOVE GROUND MUST BE DOUBLED AND THEN ADDED TO THE MINIMUM DEPTH FOR THE TOTAL BASE DEPTH.

CARE SHOULD BE TAKEN WHERE CONCRETE BASES, DRAIN-AGE STRUCTURES OR UTILITIES ARE CLOSE TOGETHER.

### POLES, ANCHOR BASES AND ARMS

ALL NEW SITE LIGHT POLES AND LUMINAIRE ARMS SHALL BE ALUMINUM IN ACCORDANCE WITH SUBSECTION 753.01 (B) AND SHALL BE DARK BRONZE IN COLOR.

### LUMINAIRES AND POLES

FOR LIGHT POLE DETAILS SEE VTRANS STANDARD SHEET E-180A.

LUMINAIRES SHALL HAVE A MOUNTING HEIGHT OF 20.5'. THE ARM LENGTH SHALL BE 7".

TYPE A: ALUMINUM, DARK BRONZE, 'COBRA HEAD' TYPE LED, TYPE III, DISTRIBUTION, WITH SPILL LIGHT CONTROL EQUIVALENT TO: BETA LED CATALOG NO. STR-LWY-3MB-04-C-UL-BZ-525-R-SC WITH PHOTO CELL.

TYPE B: ALUMINUM, DARK BRONZE, 'SHOEBOX' TYPE LED, TYPE III, WITH SPILL LIGHT CONTROL EQUIVALENT TO: VISIONAIRE LIGHTING CATALOG NO. EL2-1-T3-24LC-530-4K-UNV-BOA-BZ-PCR-RPP-CLS-10KV WITH PHOTO CELL.

POLES: TAPERED ALUMINUM, 18 FT. DARK BRONZE, WITH BASE COVER EQUIVALENT TO: GE LIGHTING SYSTEMS: RRTA-18-SA-6S-6.0-1-F

LUMINAIRE SHALL MEET THE ISO FOOTCANDLE DATA AND THE ILLUMINATION LEVELS AS DESCRIBED BELOW.

### ILLUMINATION LEVELS

PARK AND RIDE SHALL HAVE AN AVERAGE OF 1.0fc., MINIMUM OF 0.2fc., WITH MIN/MAX RATIO OF 20:1, AND AN AVE/MIN UNIFORMITY OF BETWEEN 3:1 AND 4:1 OR BETTER.

### CONDUIT

A 2 INCH (I.D.) MINIMUM CONDUIT SHALL BE USED AT ALL LOCATIONS UNLESS OTHERWISE NOTED ON THE PLANS. ALL CONDUIT SHALL BE SCHEDULE 80 PVC.

### CONDUIT SLEEVE

MINIMUM WALL THICKNESS FOR RIGID PLASTIC PIPE SLEEVES SHALL BE 1/35TH THE DIAMETER. ALL CONDUIT RUNS UNDER ROADWAY SHALL BE INSTALLED IN RIGID PLASTIC OR STEEL PIPE SLEEVES. THE SLEEVE SHALL EXTEND TO WITHIN 2 FEET OF THE SIDE OF A CONCRETE BASE OR JUNCTION BOX. WHERE NO CONCRETE BASE OR JUNCTION BOX IS PRESENT, THE SLEEVE SHALL EXTEND 4 FEET BEYOND THE OUTSIDE EDGE OF SHOULDER OR FACE OF CURB. BACKFILLING AROUND A SLEEVE SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

WHEN JACKING A SLEEVE UNDER A ROADWAY IT SHALL BE STEEL WITH A MINIMUM DIAMETER OF 8 INCHES AND MINIMUM WALL THICKNESS OF 3/8 INCH. ACTUAL LENGTH TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

### WIRE

ALL WIRING BETWEEN THE METER AND/OR POWER SOURCE AND THE FIRST POLE AND/OR JUNCTION BOX AND BETWEEN POLES AND/OR PULLBOXES SHALL BE COPPER AND SIZED AS SPECIFIED ON THE PLANS. ALL WIRE SHALL HAVE TYPE XHHW INSULATION OR EQUIVALENT.

### GROUNDING

ALL CONDUIT MUST INCLUDE A GROUNDING CONDUCTOR. RIGID STEEL CONDUIT SHALL BE PROPERLY CONNECTED AT THE JOINTS SO AS TO BE WATERTIGHT AND MAINTAIN ELECTRICAL CONTINUITY AND HAVE GROUNDING BUSHINGS SO AS TO ACT AS A GROUND CONDUCTOR.

ALUMINUM WIRE SHALL NOT BE USED FOR GROUND WIRE.

### PULLBOXES /JUNCTION BOXES

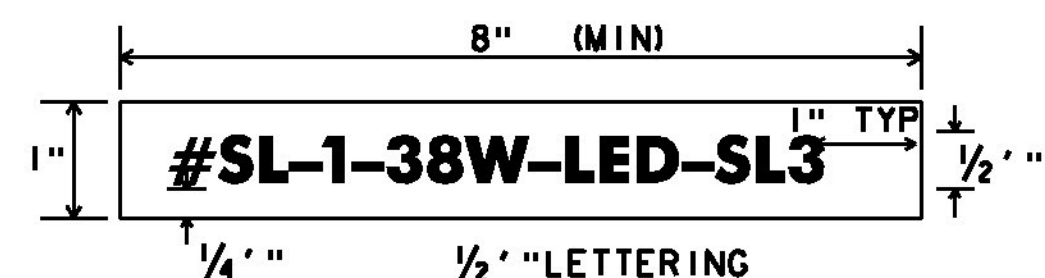
FOR DETAILS SEE VTRANS STANDARD SHEET E-173.

### GENERAL

THE LOAD ON EACH BRANCH OF A THREE WIRE CIRCUIT SHALL BE AS BALANCED AS POSSIBLE, LOAD TO NEUTRAL.

THE LAST CONCRETE POLE BASE AT THE END OF EACH CIRCUIT AND SOME JUNCTION BOXES SHALL HAVE A CONDUIT SWEEP WITH CAP INSTALLED FOR FUTURE USE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY ELECTRICAL PERMITS.



LEGEND: BLACK OR WHITE (NON-REFL.) - STAMPED PRIOR TO PRINTING/PAINTING.  
BACKGROUND: NATURAL ALUMINUM OR FLAT BLACK SURFACE, SAME AS POLE FINISH.

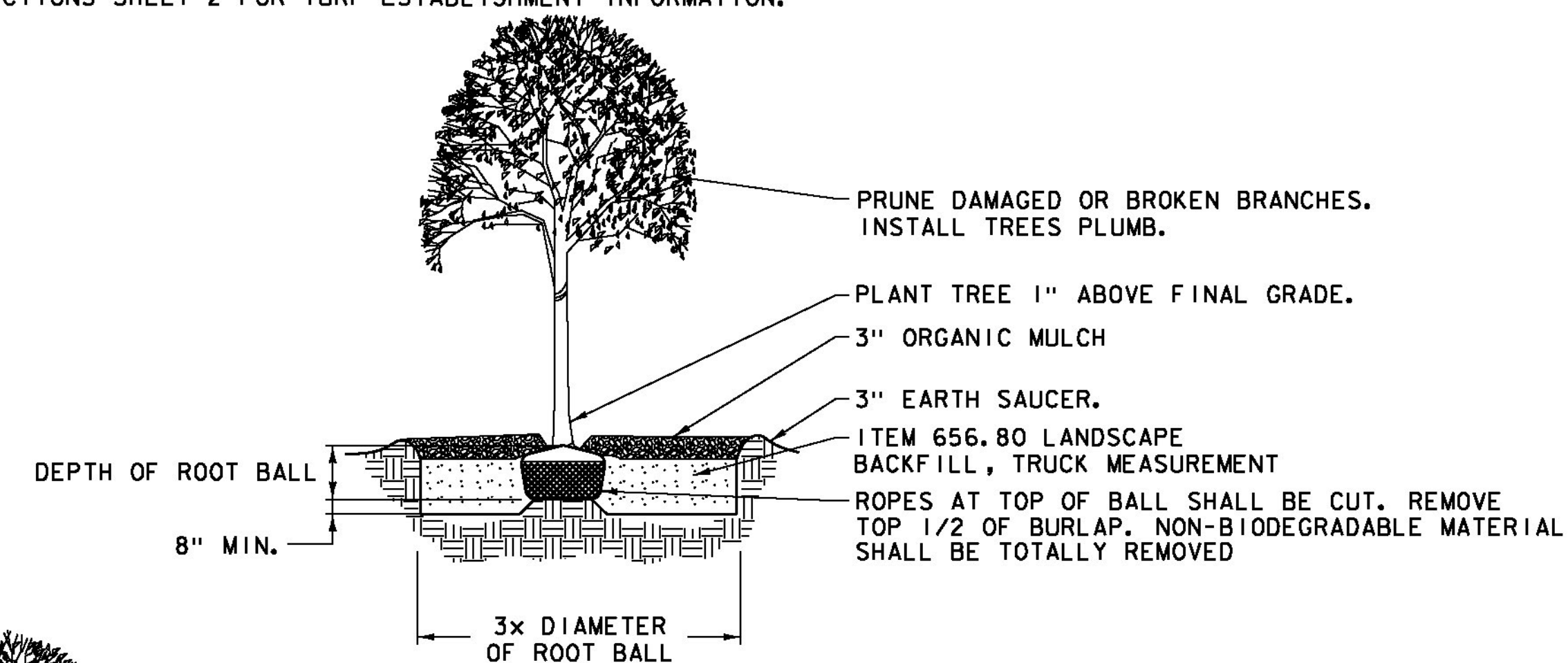
### DETAILS FOR TAGS ATTACHED TO SITE LIGHT POLES

NOT TO SCALE

1. THE TAG SHALL BE MOUNTED ON ALL STREET LIGHT POLES IN SUCH A MANNER AS NOT TO BE EASILY REMOVED, SUCH AS WELDED, RIVETED, OR BOLTED WITH VANDAL PROOF BOLTS.
2. THE LETTERS SHALL BE PUNCHED, STAMPED, ENGRAVED, OR PHOTO-ETCHED. PUNCHING, STAMPING OR ENGRAVING SHALL PENETRATE AT LEAST 1/2 THE BASE MATERIAL THICKNESS.
3. THE BASE MATERIAL FOR THE TAG SHALL BE ALUMINUM WITH A MINIMUM THICKNESS OF 0.100 INCH.
4. THE TAG SHALL BE ATTACHED TO THE POLE ABOVE THE HANDHOLE, 6 INCHES MAXIMUM. IF THE POLE HAS A TRANSFORMER BASE ATTACH TAG TO COVER.
5. TYPE 'A' FIXTURE TAG SHALL READ: SL--38W-LED-SL3  
TYPE 'B' FIXTURE TAG SHALL READ: SL--76W-LED-5WQ

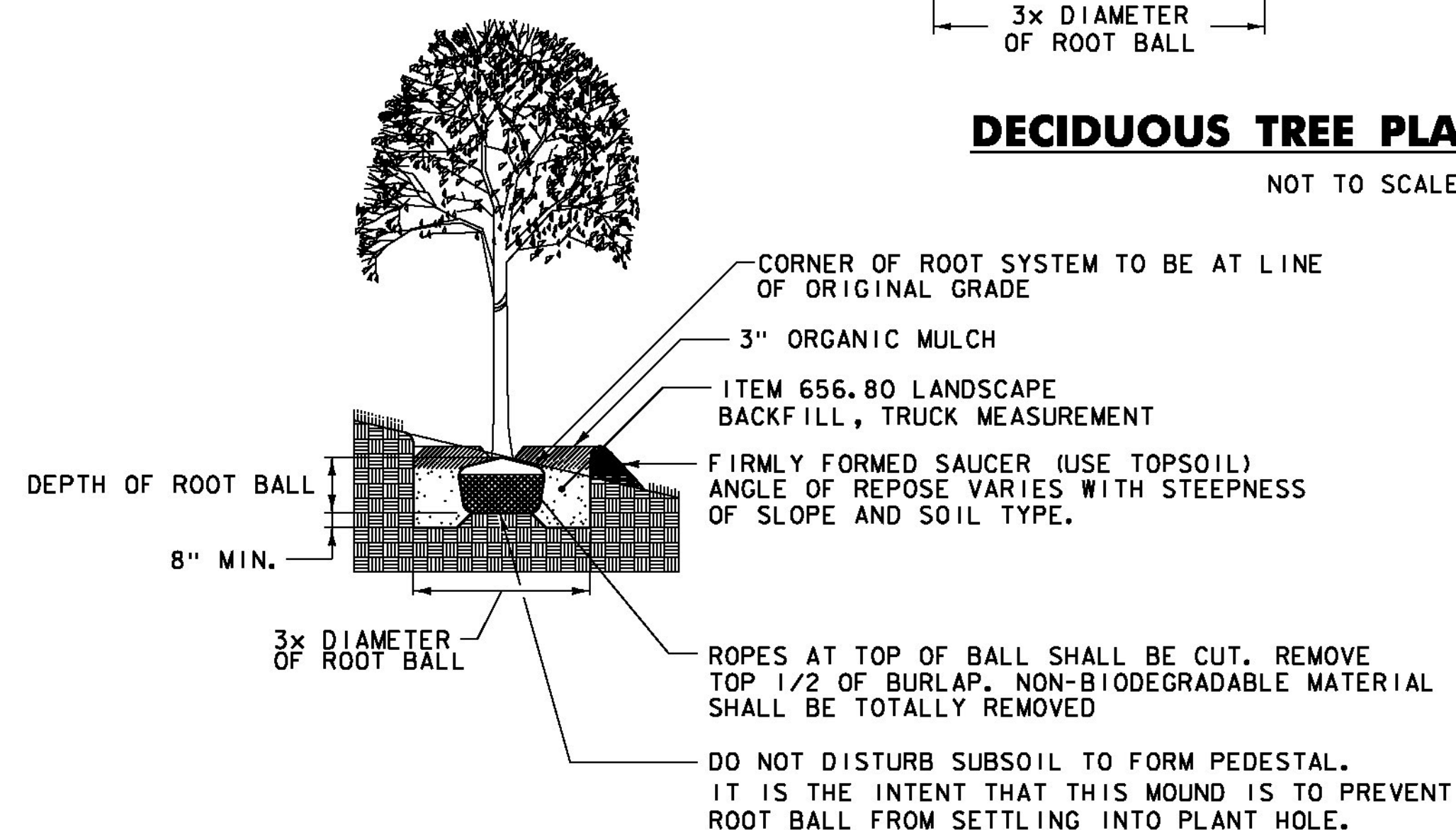
## GENERAL LANDSCAPING NOTES

1. APPLICABLE STANDARDS: AMERICAN NATIONAL STANDARDS FOR TREE CARE OPERATIONS, ANSI A300. AMERICAN STANDARD FOR NURSERY STOCK, ANDSO Z60.1. HORTUS THIRD, THE STAFF OF THE L.H. BAILEY HORTORIUM. ALL STANDARDS SHALL INCLUDE THE LATEST ADDITIONS AND AMENDMENTS AS OF THE DATE OF ADVERTISEMENT FOR BIDS.
2. FERTILIZER: SLOW RELEASE TYPE, OR SUBSTITUTE APPROVED BY THE ENGINEER, APPLIED AS FOLLOWS:  
TREES AND SHRUBS  
MARCH-MAY 10-10-10  
MAY-OCTOBER 6-10-10  
OCTOBER-MARCH 4-12-12  
RATE OF APPLICATION: 1lb./INCH IN CALIPER
3. EXCAVATE SOIL TO 3X WIDER THAN ROOT BALL DIAMETER FOR TREES AND 2X WIDER FOR SHRUBS. SET BALLED AND BURLAPPED (B&B) STOCK ON LAYER OF COMPACTED SOIL MIXTURE, STAND PLUMB AND IN CENTER OF PIT OR TRENCH WITH TOP OF BALL AT THE SAME ELEVATION AS ADJACENT FINISHED LANDSCAPE GRADES. REMOVE WIRE BASKET AND ALL TWINE, REMOVE BURLAP FROM UPPER HALF OF BALLS; RETAIN ON BOTTOMS. SET CONTAINER GROWN SOCK AS SPECIFIED FOR B&B MATERIAL, EXCEPT CUT CANS ON TWO SIDES WITH AN APPROVED CAN CUTTER.
4. DISH TOP OF BACKFILL TO ALLOW FOR MULCHING. MULCH PITS WITH NOT LESS THAN 3" OF ORGANIC MULCH. MULCH SHALL NOT COME IN CONTACT WITH TREE BARK.
5. ALL PLANTS SHALL BE CAREFULLY AND THOROUGHLY WATERED DURING PLANTING AND AS OFTEN AS NECESSARY THEREAFTER TO PROVIDE THE BEST GROWING CONDITIONS UNTIL ACCEPTANCE OF THE WORK.
6. BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING. MAINTAIN TREES, SHRUBS, AND OTHER PLANTS BY PRUNING, CULTIVATING, AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS. RESTORE OR REPLACE DAMAGED WRAPPINGS. SPRAY AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE, AT THE EXPENSE OF THE CONTRACTOR.
7. MAINTAIN LAWNS BY WATERING, FERTILIZING, WEEDING, MOWING (2" HEIGHT), TRIMMING, AND OTHER OPERATIONS SUCH AS ROLLING, REGRADING, AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS AT THE EXPENSE OF THE CONTRACTOR.
8. SEE TYPICAL SECTIONS SHEET 2 FOR TURF ESTABLISHMENT INFORMATION.



### DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE



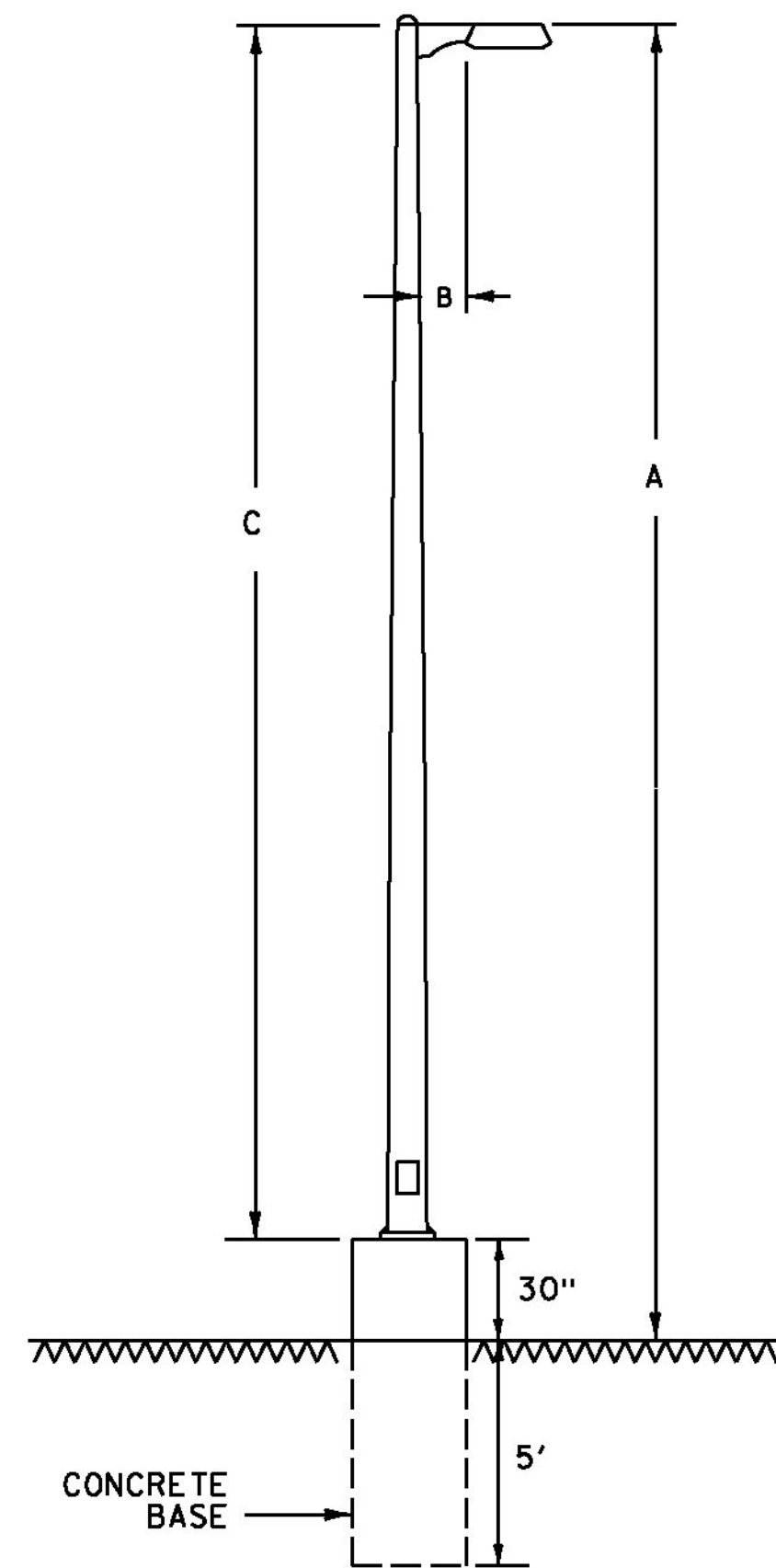
### PLANTING ALONG SLOPE

NOT TO SCALE



PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)

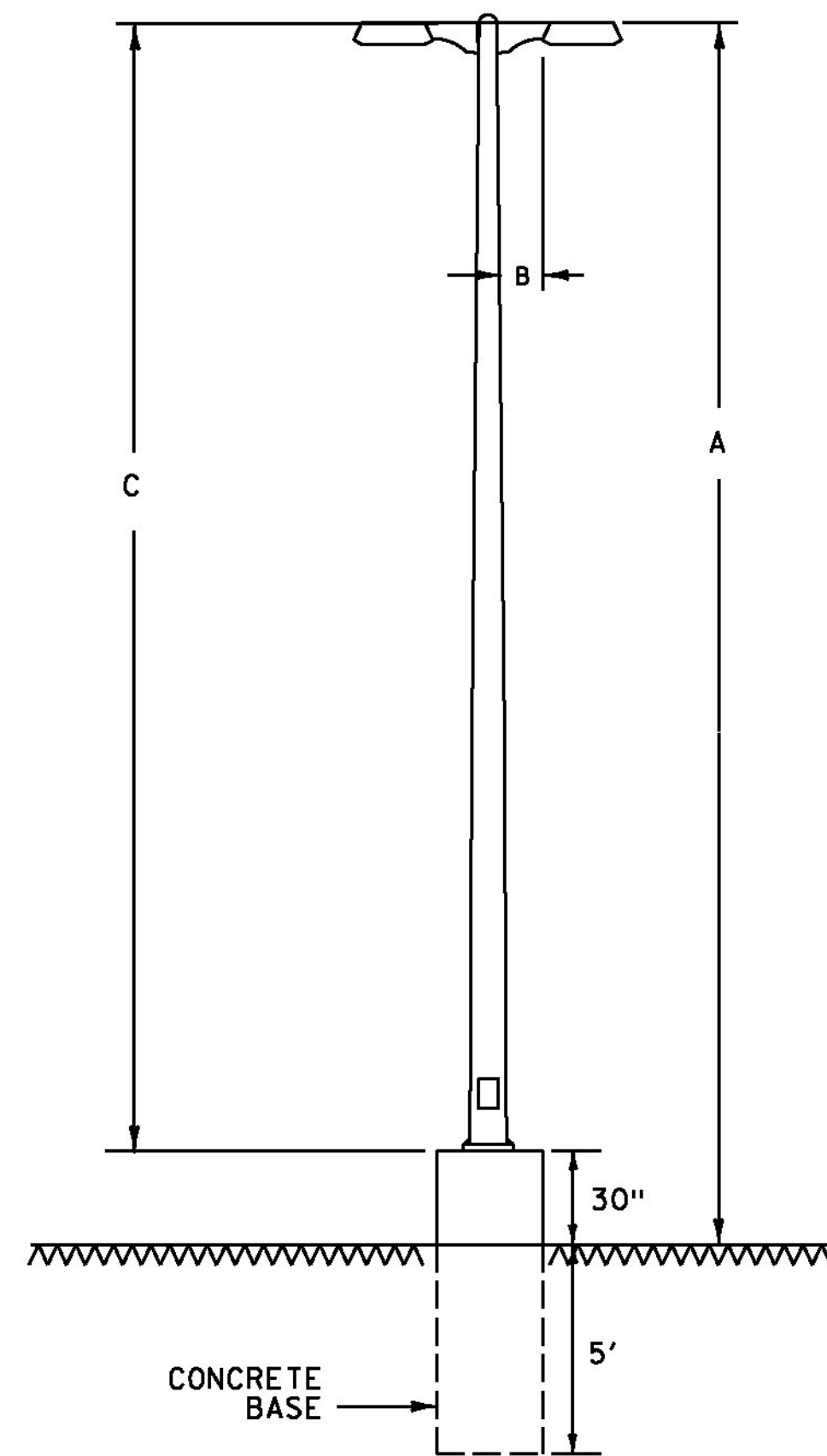
FILE NAME: z09k250+yp.dgn PLOT DATE: 6/25/2014  
PROJECT LEADER: G. SANTY DRAWN BY: I. MAYNARD  
DESIGNED BY: I. MAYNARD CHECKED BY: M. FOISY  
LIGHTING AND LANDSCAPING DETAILS SHEET 21 OF 43



DIMENSIONS:  
 A = MOUNTING HEIGHT - 20.5'  
 B = LUMINAIRE SUPPORT ARM LENGTH - 7"  
 C = POLE HEIGHT - 18'

**TYPE 'A' SITE LIGHT**  
 NOT TO SCALE

SEE STANDARD E-180A  
 FOR ADDITIONAL INFORMATION



DIMENSIONS:  
 A = MOUNTING HEIGHT - 20.5'  
 B = LUMINAIRE SUPPORT ARM LENGTH - 7"  
 C = POLE HEIGHT - 18'

**TYPE 'B' SITE LIGHT**  
 NOT TO SCALE

<p>LUMINAIRE: LENS FINISH: CLEAR</p> <p>HOUSING: ALUMINUM</p> <p>LAMP: TYPE: System watts:38W 24 LEDs @ 530mA LUMENS: 1303</p> <p>ANSI/IES TYPE: TYPE III CUT-OFF OPTICS BUG Rating: B0-U0-G0</p>	<p>A = 18"        B = 14.5"        C = 4"        D = 21.5"</p>
<p>LUMINAIRE: EL2-1-T3-24LC-530MA-CLS</p> <p>LAMP TYPE: LED</p> <p>MOUNTING: 18' POLES MOUNTED ON CONCRETE BASES.</p>	
<p>STREETSIDE</p> <p>HOUSESIDE</p> <p>GRID: 10' x 10'</p>	

**FIXTURE TYPE 'A'**  
**ISO-FOOTCANDLE DATA**  
 NOT TO SCALE

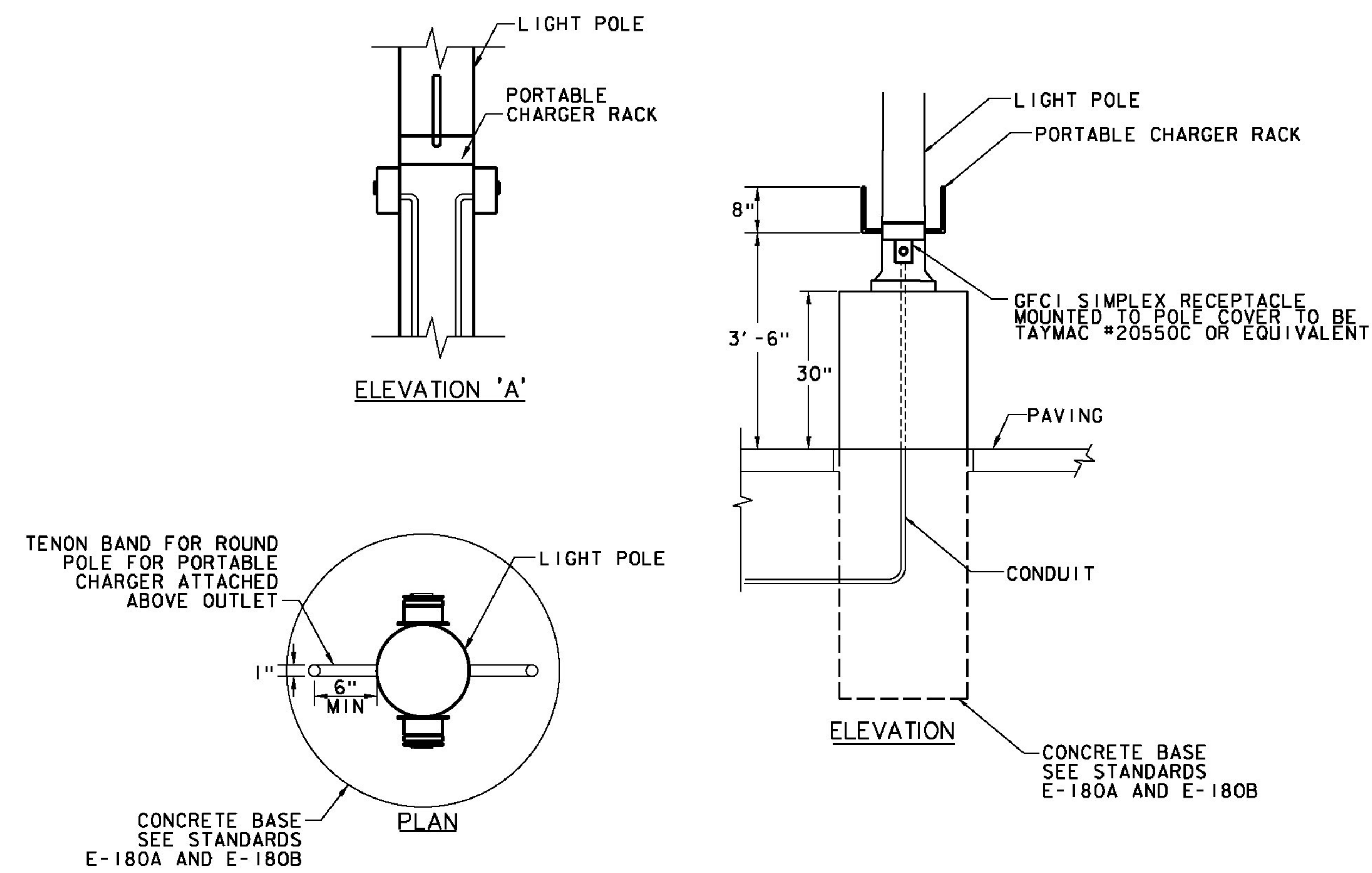
<p>LUMINAIRE: LENS FINISH: CLEAR</p> <p>HOUSING: ALUMINUM</p> <p>LAMP: TYPE: System watts: (2)38W 24 LEDs @ 530mA, each LUMENS: 2967, each</p> <p>ANSI/IES TYPE: TYPE V CUT-OFF OPTICS BUG Rating: B2-U0-G0</p>	<p>A = 18"        B = 14.5"        C = 4"        D = 21.5"</p>
<p>LUMINAIRE: EL2-1-T5W-24LC-530</p> <p>LAMP TYPE: LED</p> <p>MOUNTING: 18' POLES MOUNTED ON CONCRETE BASES.        STREETSIDE</p>	
<p>HOUSESIDE</p> <p>GRID: 10' x 10'</p>	

**FIXTURE TYPE 'B'**  
**ISO-FOOTCANDLE DATA**  
 NOT TO SCALE

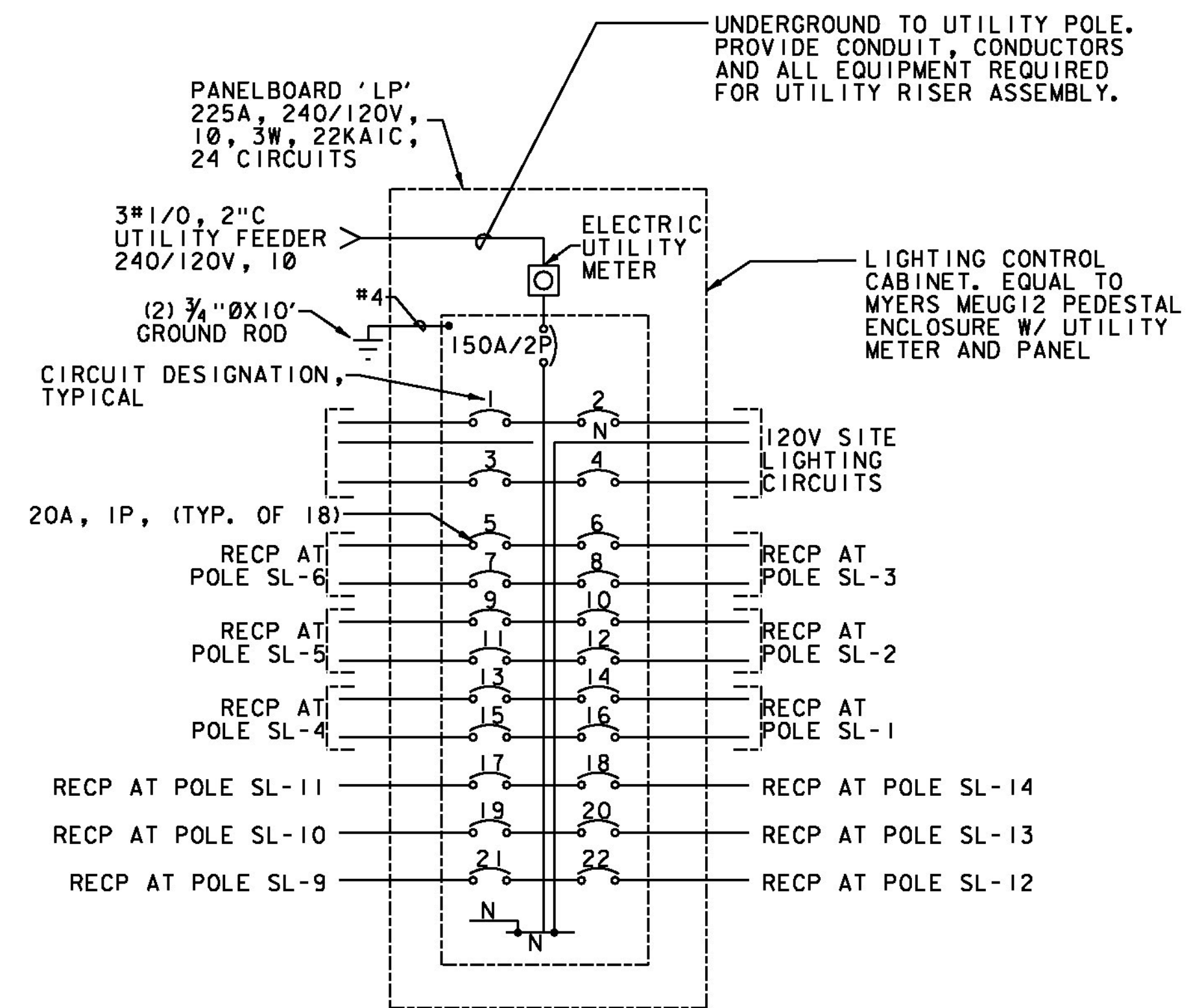
PROJECT NAME: SPRINGFIELD  
 PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09k250+yp.dgn PLOT DATE: 6/25/2014  
 PROJECT LEADER: G. SANTY DRAWN BY: I. MAYNARD  
 DESIGNED BY: I. MAYNARD CHECKED BY: M. FOISY  
 LIGHTING DETAILS I SHEET 22 OF 43





**SPECIAL PROVISION (ELECTRIC VEHICLE OUTLET, LEVEL I)**  
NOT TO SCALE



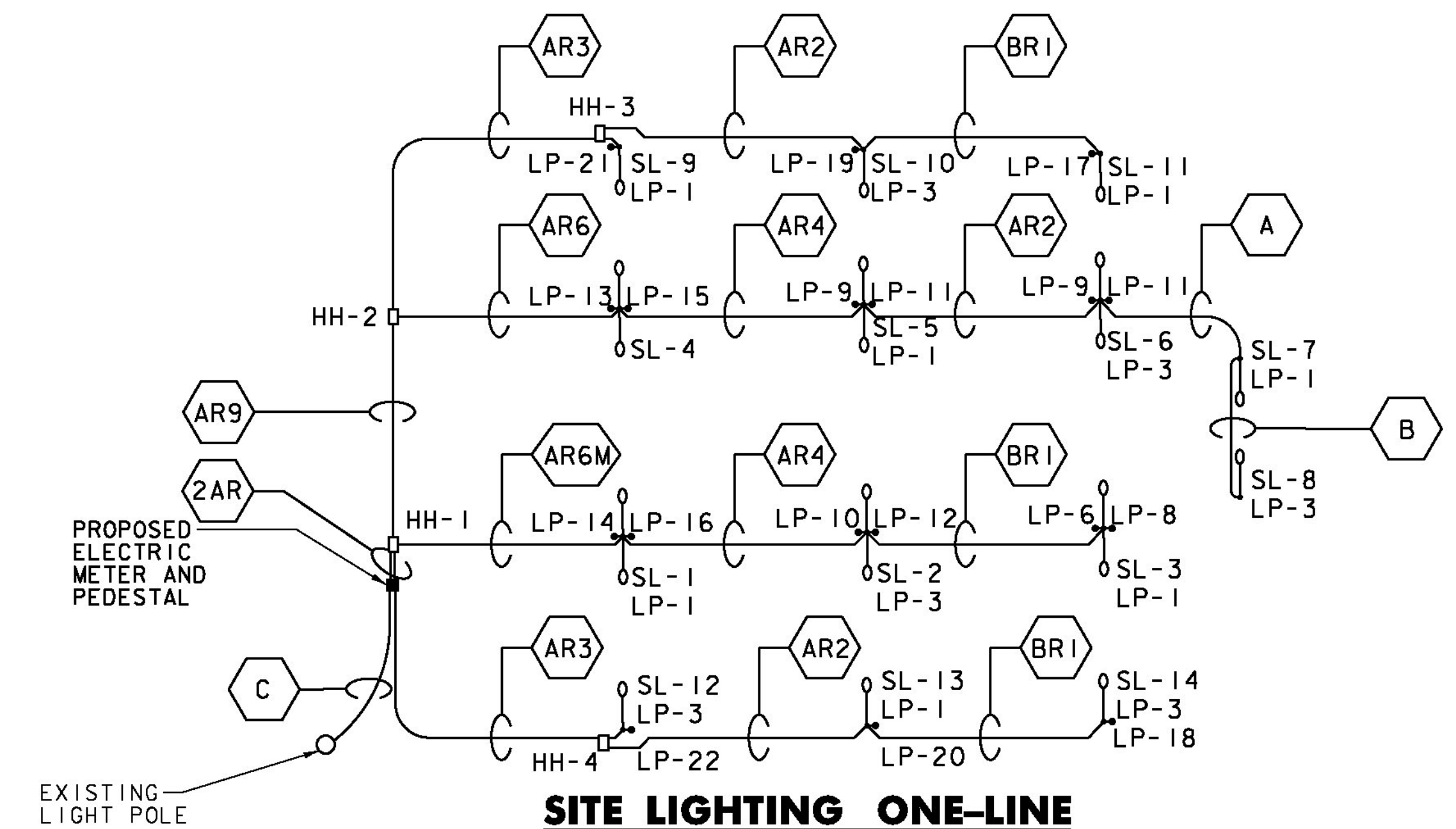
**ONE-LINE DIAGRAM ROADWAY LIGHTING SERVICE PEDESTAL**

NOT TO SCALE  
NOTE: NO RELAYS REQUIRED

KEY	CONDUIT SIZE	CONDUCTORS			
		FOR FIXTURES	FOR RECEPTACLES	FOR SERVICE	FOR GROUND
2AR	(2)2"	4#10	8#4, 6#6, 4#8 & 4#4, 4#6, 4#10		1#4G
A	2"	4#10			1#6G
AR9	2"	4#10	8#4, 6#6, 4#8		1#4G
AR6	2"	4#10	4#4, 4#6, 4#8		1#4G
AR6M	2"	4#10	4#4, 4#6, 4#10		1#4G
AR4	2"	4#10	4#4, 4#6,		1#4G
AR3	2"	4#10	4#4, 2#6		1#4G
AR2	2"	4#10	4#4		1#4G
B	2"	2#10			1#6G
BR2	2"	2#10	4#4		1#4G
C	3"			3#2/0	1#6G

**GENERAL NOTES**

1. MAXIMUM OF 270° IN TOTAL BENDS PERMITTED IN SINGLE RUN OF CONDUIT
2. LIGHTS SHALL BE FUSED AT BASE WITH Y-TYPE FUSE KIT. WITH WATERPROOF INSULATED SEAL "FLOOD SEAL" SIZE OF SEAL SHALL MATCH WIRE AND HAVE A 10 AMP FUSE.
3. CIRCUIT CONDUCTORS INCLUDING NEUTRAL CONDUCTOR SHALL BE CLEARLY IDENTIFIED BY CORROSION RESISTANT TAGS INDICATING CIRCUIT NUMBER AND PANEL SOURCES AT EVERY POLE BASE AND HANDHOLE.
4. UTILIZE APPROVED DUAL-RATED PARALLEL TAP CONNECTOR WITH INSULATED COVER FOR TAPS AT POLE BASE.
5. UTILIZE APPROVED DUAL-RATED PARALLEL TAP CONNECTOR WITH WATERTIGHT CONNECTOR, SUITABLE FOR DIRECT BURIAL IN JUNCTION BOXES, HANDHOLES AND MANHOLES.



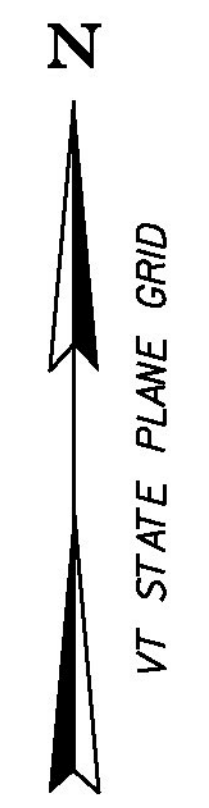
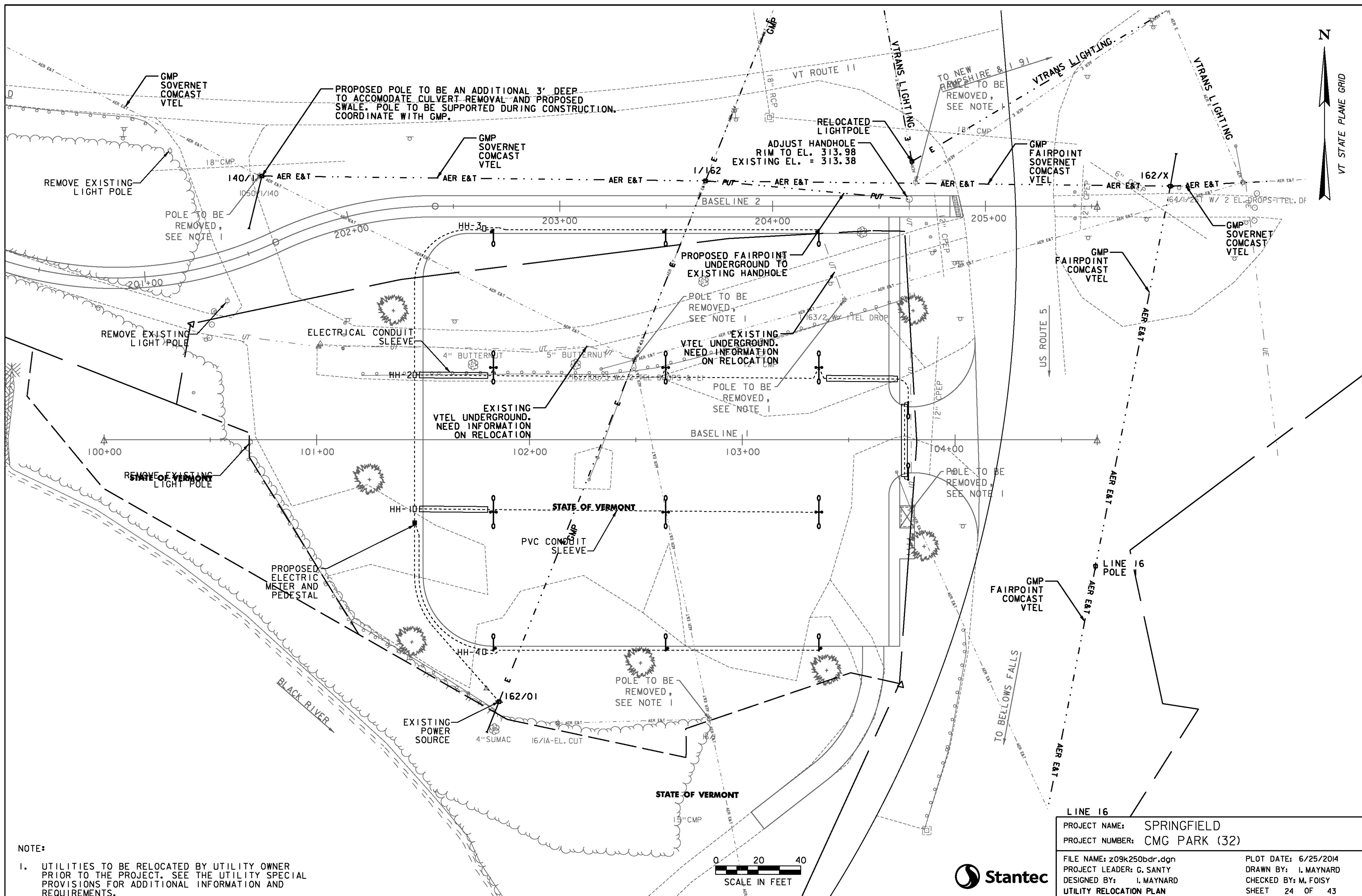
**SITE LIGHTING ONE-LINE**

NOT TO SCALE

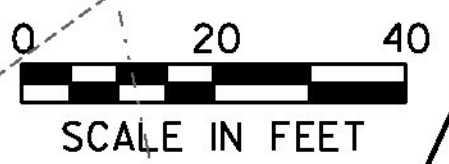
PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09k250+yp.dgn PLOT DATE: 6/25/2014  
PROJECT LEADER: G. SANTY DRAWN BY: I. MAYNARD  
DESIGNED BY: I. MAYNARD CHECKED BY: M. FOISY  
LIGHTING DETAILS 2 SHEET 23 OF 43

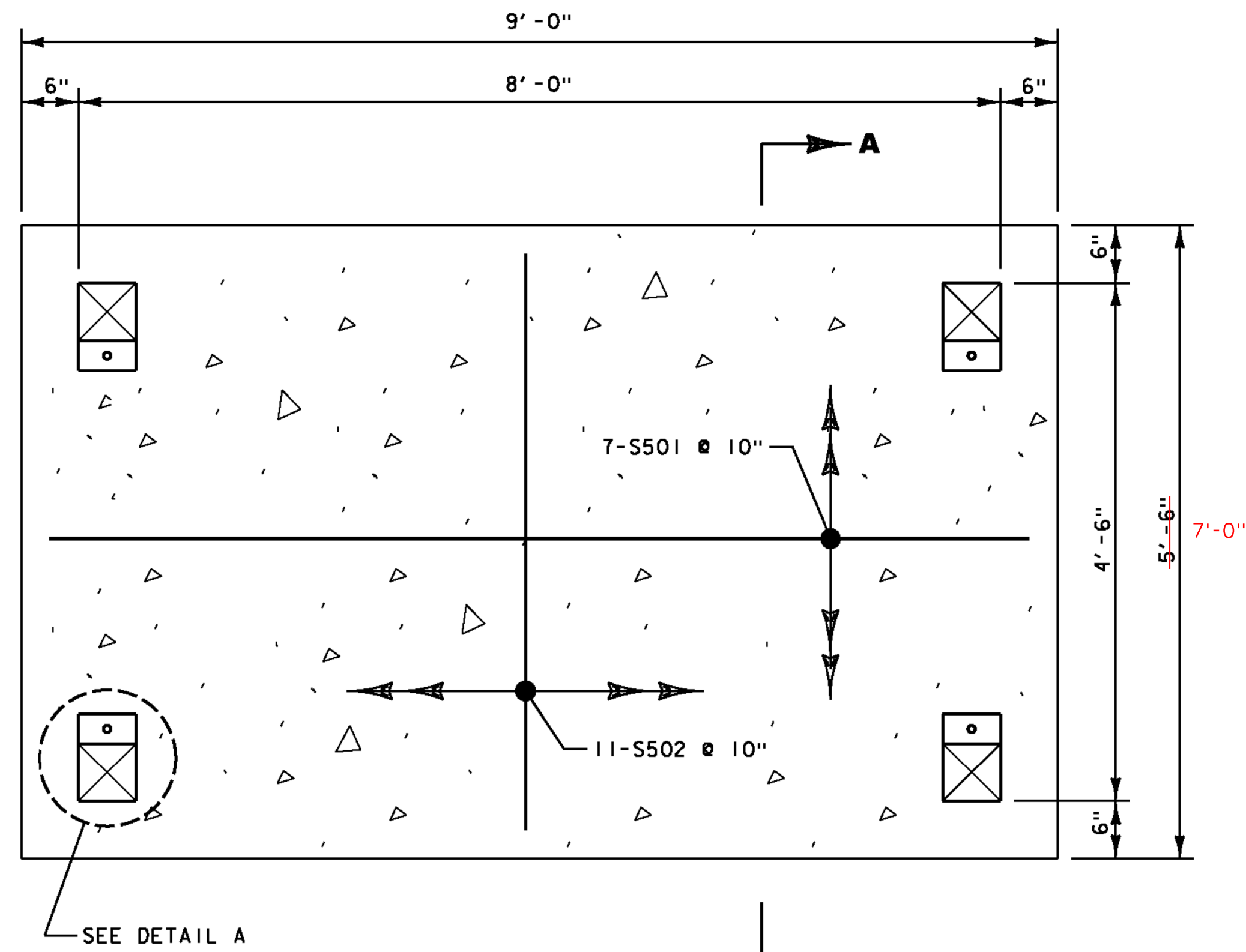




NOTE:  
 1. UTILITIES TO BE RELOCATED BY UTILITY OWNER PRIOR TO THE PROJECT. SEE THE UTILITY SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



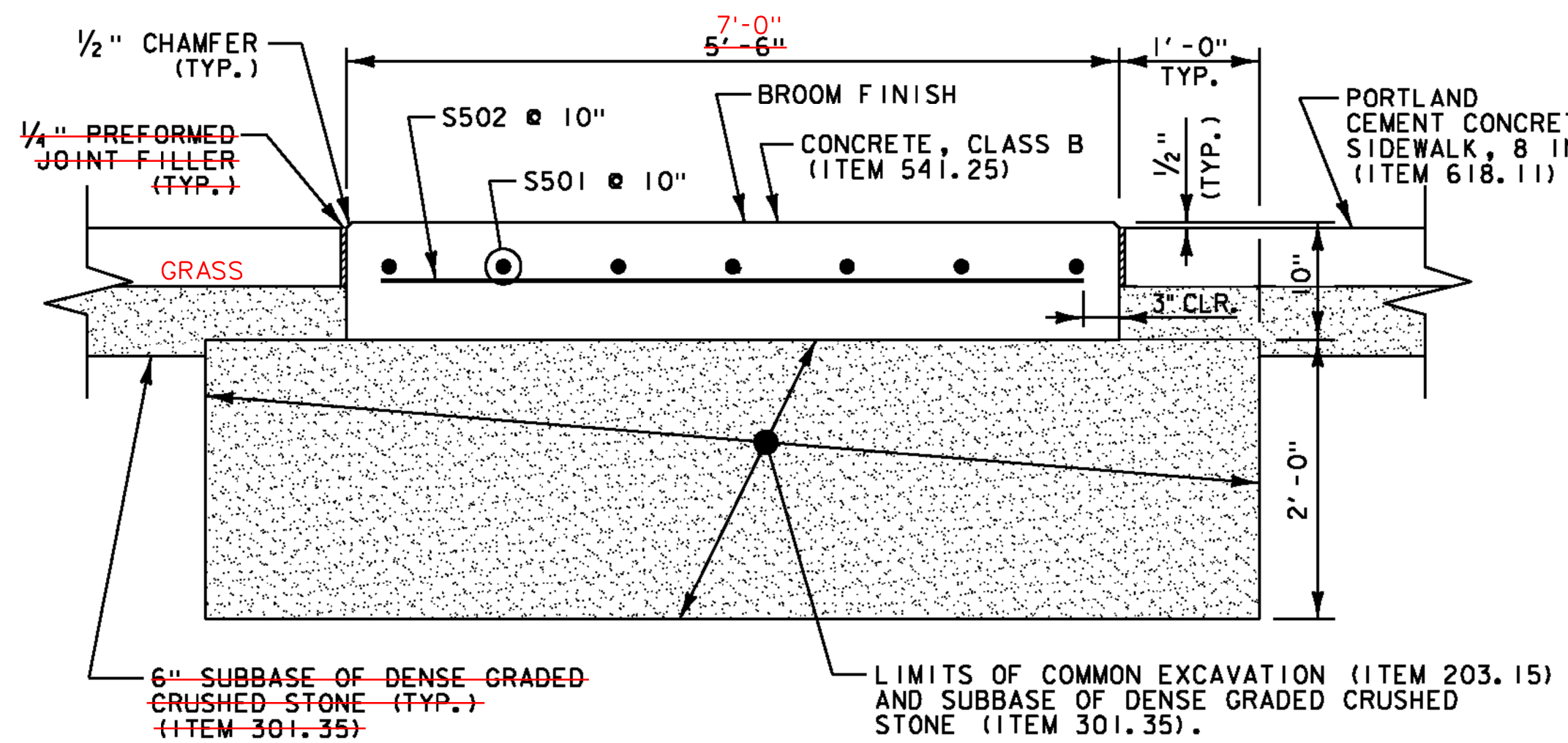
PROJECT NAME:	SPRINGFIELD	FILE NAME:	z09k250bdr.dgn	PLOT DATE:	6/25/2014
PROJECT NUMBER:	CMG PARK (32)	PROJECT LEADER:	G. SANTY	DRAWN BY:	I. MAYNARD
		DESIGNED BY:	I. MAYNARD	CHECKED BY:	M. FOISY
		UTILITY RELOCATION PLAN		SHEET	24 OF 43



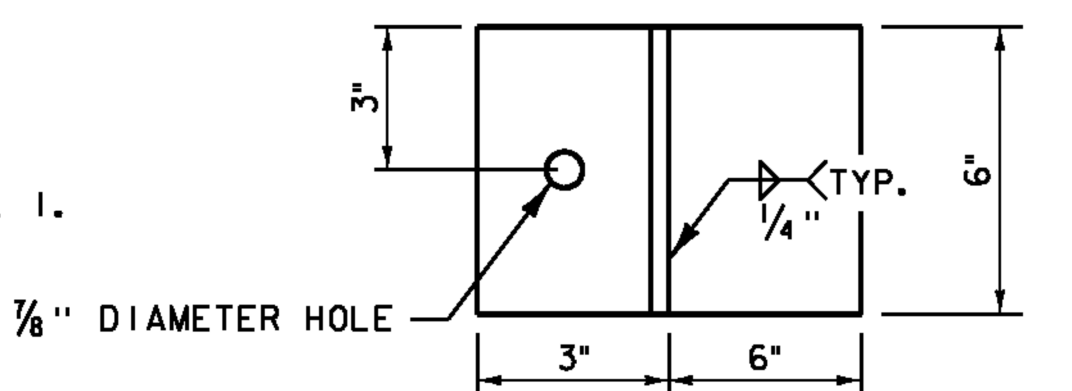
**PLAN**  
SCALE: 1" = 1'-0"

REINFORCING SCHEDULE					
NO.	PIECES	SIZE	LENGTH	MARK	TYPE
7	8	5	8'-6"	S501	STR.
11	5	5	5'-6"	S502	STR.

**NOTES:**  
REINFORCING STEEL SHALL BE PAID UNDER ITEM 507.11 REINFORCING STEEL, LEVEL 1.

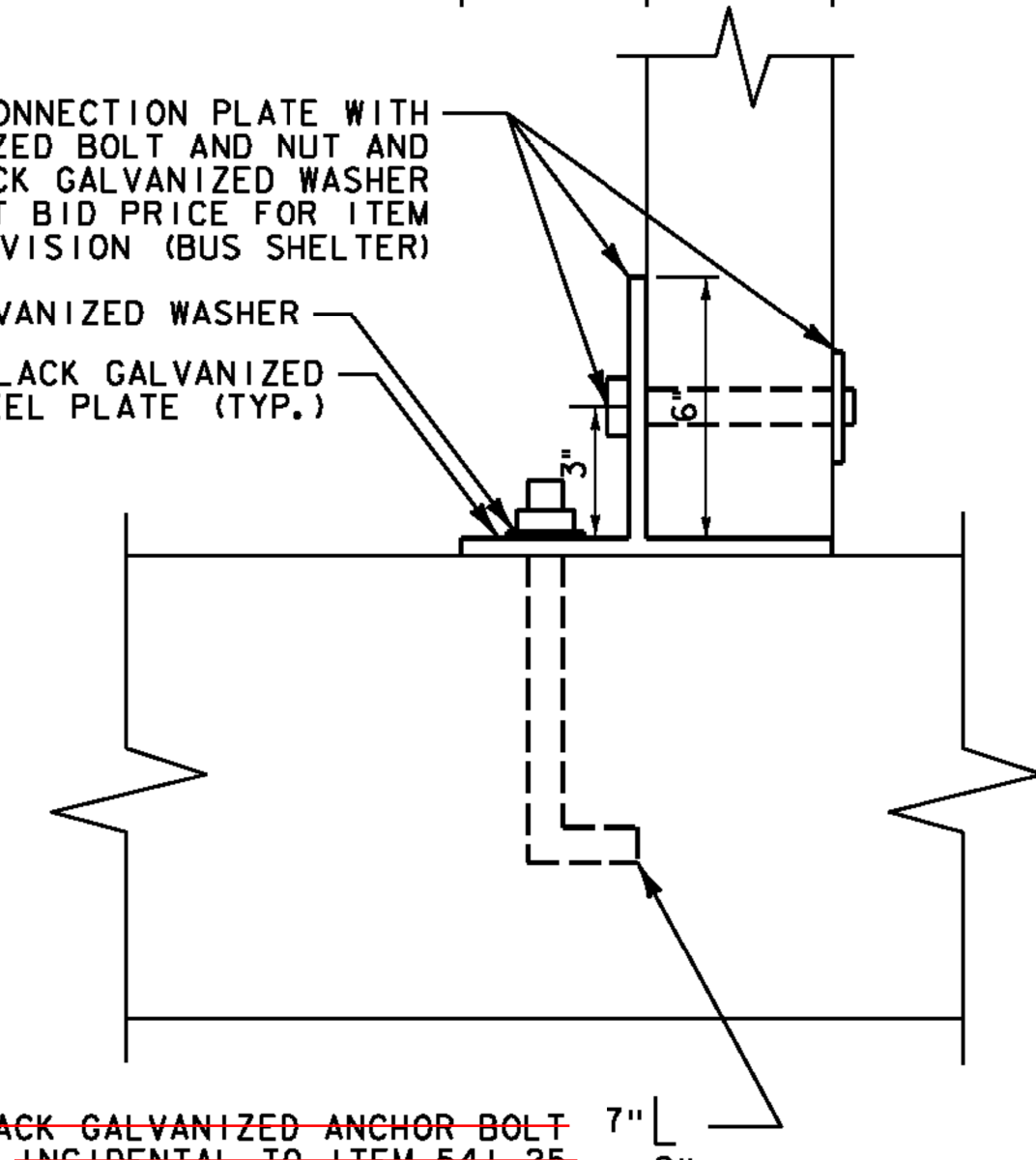


**SECTION A-A**  
SCALE: 1" = 1'-0"



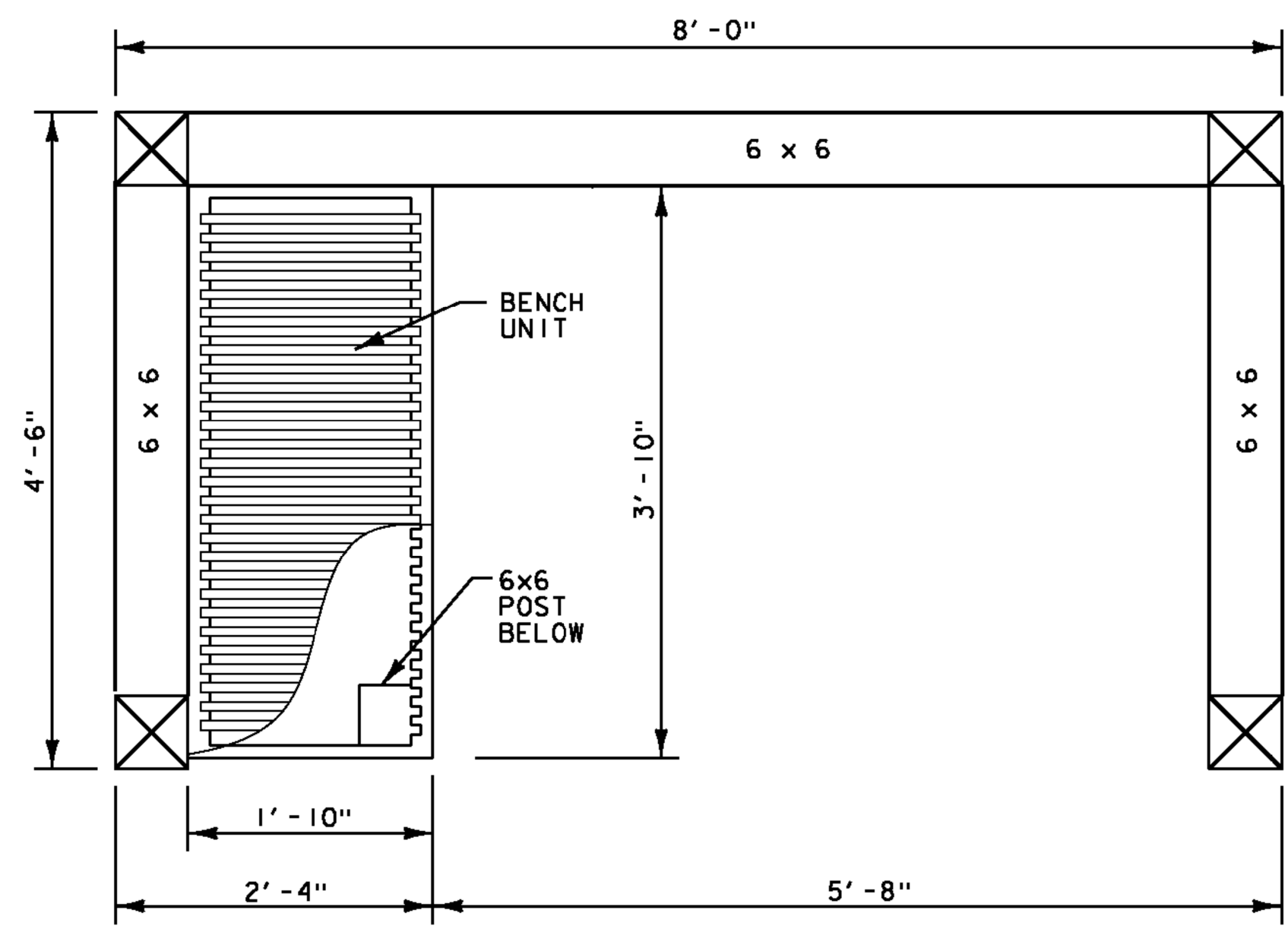
BLACK GALVANIZED POST CONNECTION PLATE WITH A 3/4" BLACK GALVANIZED BOLT AND NUT AND A 3" SQUARE BLACK GALVANIZED WASHER INCLUDED IN THE UNIT BID PRICE FOR ITEM 900.645 SPECIAL PROVISION (BUS SHELTER)

3/4" BLACK GALVANIZED WASHER  
3/8" BLACK GALVANIZED STEEL PLATE (TYP.)

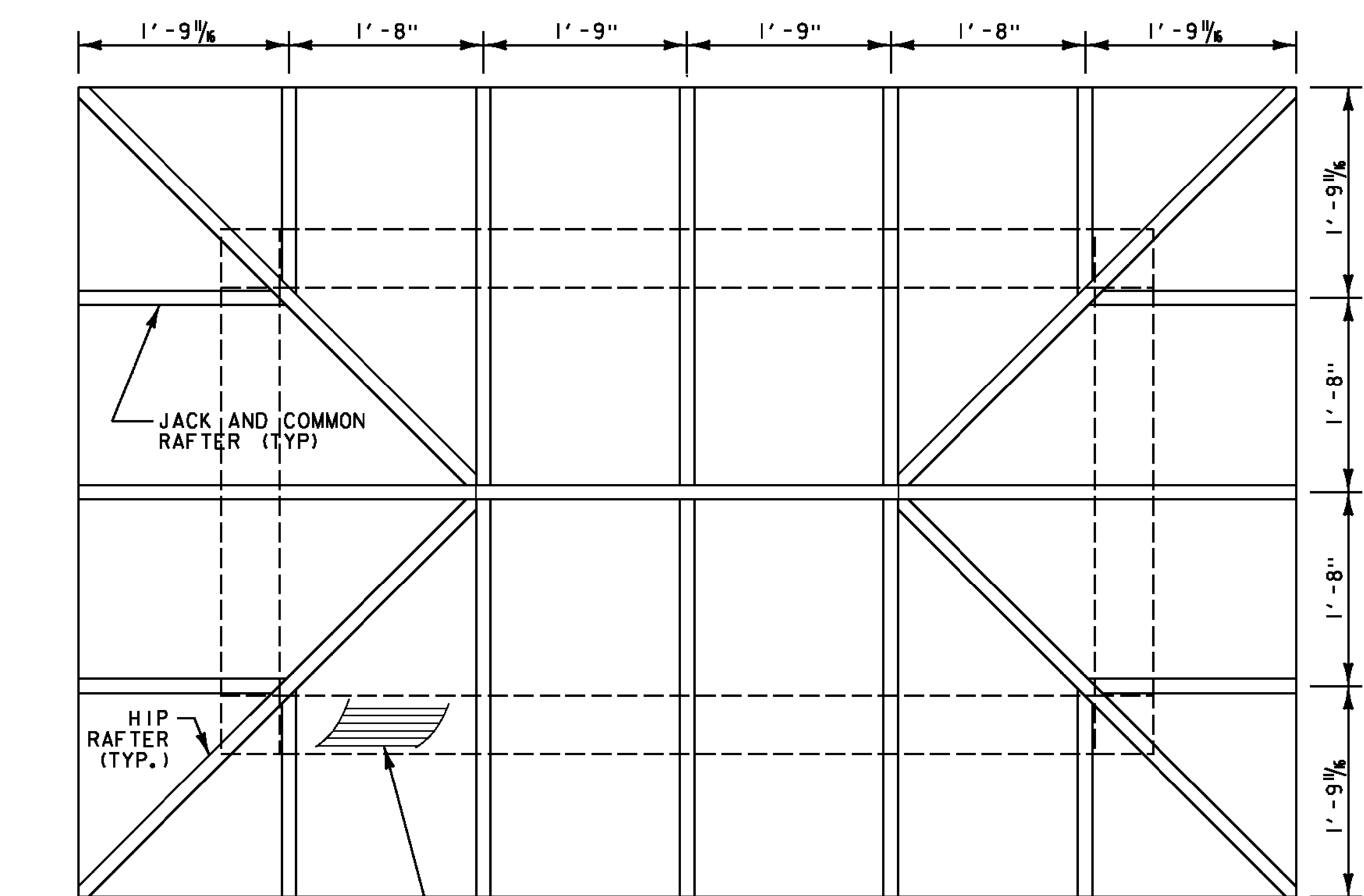


**NOTE:** DRILL AND EPOXY ANCHORING WILL BE PERMITTED. MINIMUM 3/4" ANCHOR ROD EMBEDMENT INTO CONCRETE SHALL BE 6" AND HAVE A MINIMUM PULL OUT STRENGTH OF 3,000 LBS.

**DETAIL A**  
NOT TO SCALE



**PLAN VIEW**  
SCALE: 1" = 1'-0"



ROOF DECKING TO BE NOMINAL 2x6 V-GROOVE, T&G ROOF DECK.

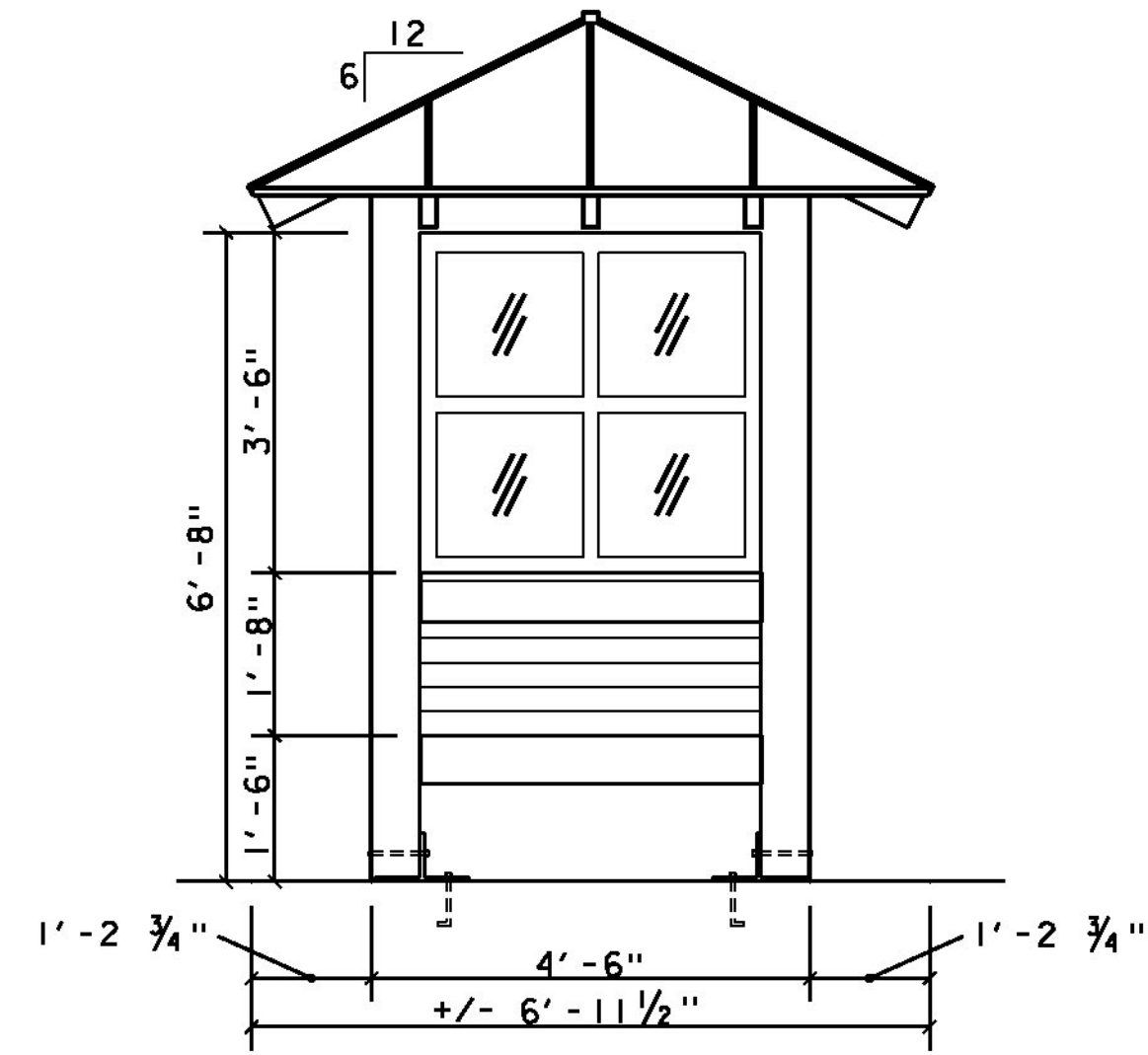
**NOTES:**  
1. JACK AND COMMON RAFTERS ARE 2x6.  
2. HIP RAFTERS ARE 2x7  
3. RIDGE BEAM IS 2x8

**ROOF FRAMING**  
SCALE: 1" = 1'-0"

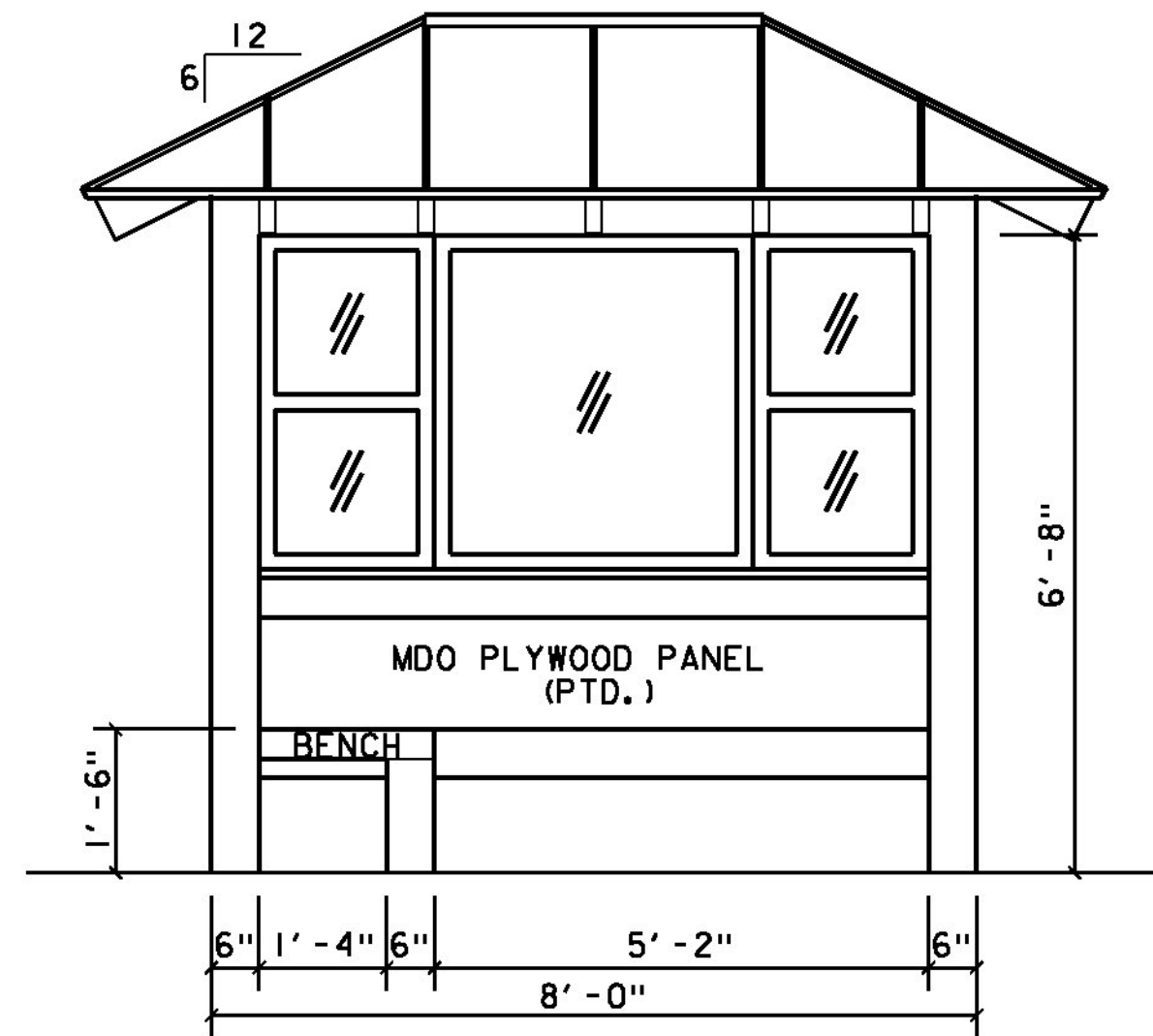
- NOTES:**
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION, 2011 STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, DATED 2010, AND ITS LATEST REVISIONS.
  - REINFORCING PLACEMENT TOLERANCES SHALL BE:  
SPACING +/- 1"  
CLEARANCE +/- 1/4"
  - ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2" BY 1/2"
  - WATER REPELLENT SILANE (ITEM 514.10) SHALL BE APPLIED TO ALL EXPOSED CONCRETE.
  - ALL MATERIALS AND WORK DETAILED ON THIS SHEET SHALL BE INCLUDED UNDER ITEM 900.645 SPECIAL PROVISION (BUS SHELTER) UNLESS OTHERWISE NOTED.
  - ALL WOODEN PEGS SHALL BE 1" DIAMETER OAK.
  - THE STRUCTURE WAS DESIGNED FOR THE FOLLOWING LOADS:  
GROUND SNOW LOAD = 100 psf  
BASIC WIND SPEED = 90 mph  
CATEGORY I
  - ALL DIMENSIONS ARE NOMINAL. MEMBERS SHALL BE SURFACED ON FOUR SIDES.
  - TIMBER FRAMING SHALL BE APPEARANCE GRADE WHITE OAK (NO. 1).  
ROOF SHEATHING SHALL BE NO. 1 OR NO. 2 SPF.  
BENCH FRAMING SHALL BE APPEARANCE GRADE WHITE OAK (NO. 1).
  - SEE BUS SHELTER SPECIAL PROVISION IN CONTRACT DOCUMENTS FOR ADDITIONAL REQUIREMENTS.

PROJECT NAME:	SPRINGFIELD
PROJECT NUMBER:	CMG PARK (32)
FILE NAME:	z09k250shltr_det.dgn
PROJECT LEADER:	M. FOISY
DESIGNED BY:	J. HUNGERFORD
BUS SHELTER DETAILS I	
PLOT DATE:	7/22/2014
DRAWN BY:	L. BUXTON
CHECKED BY:	G. BOGUE
SHEET	25 OF 43

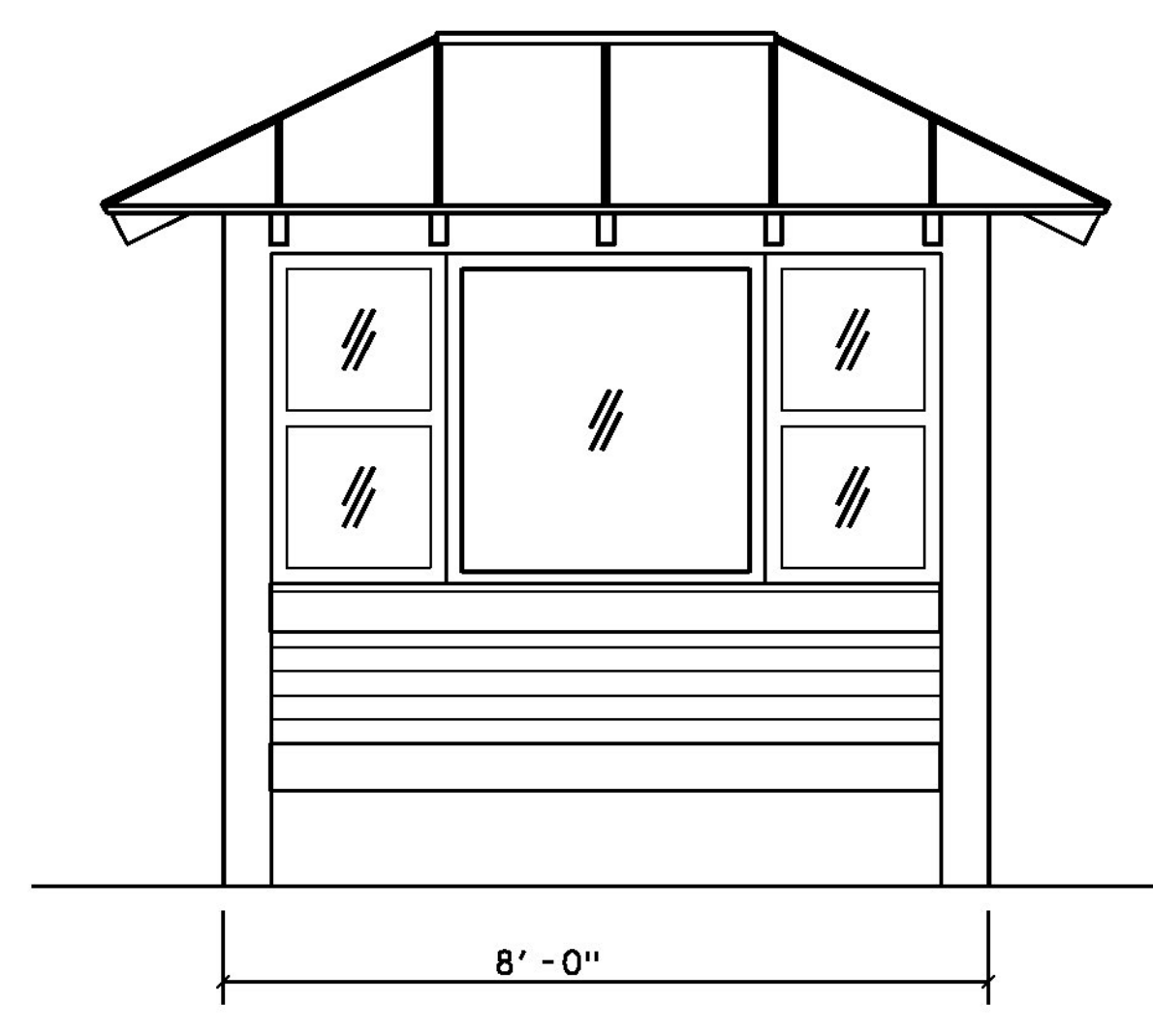




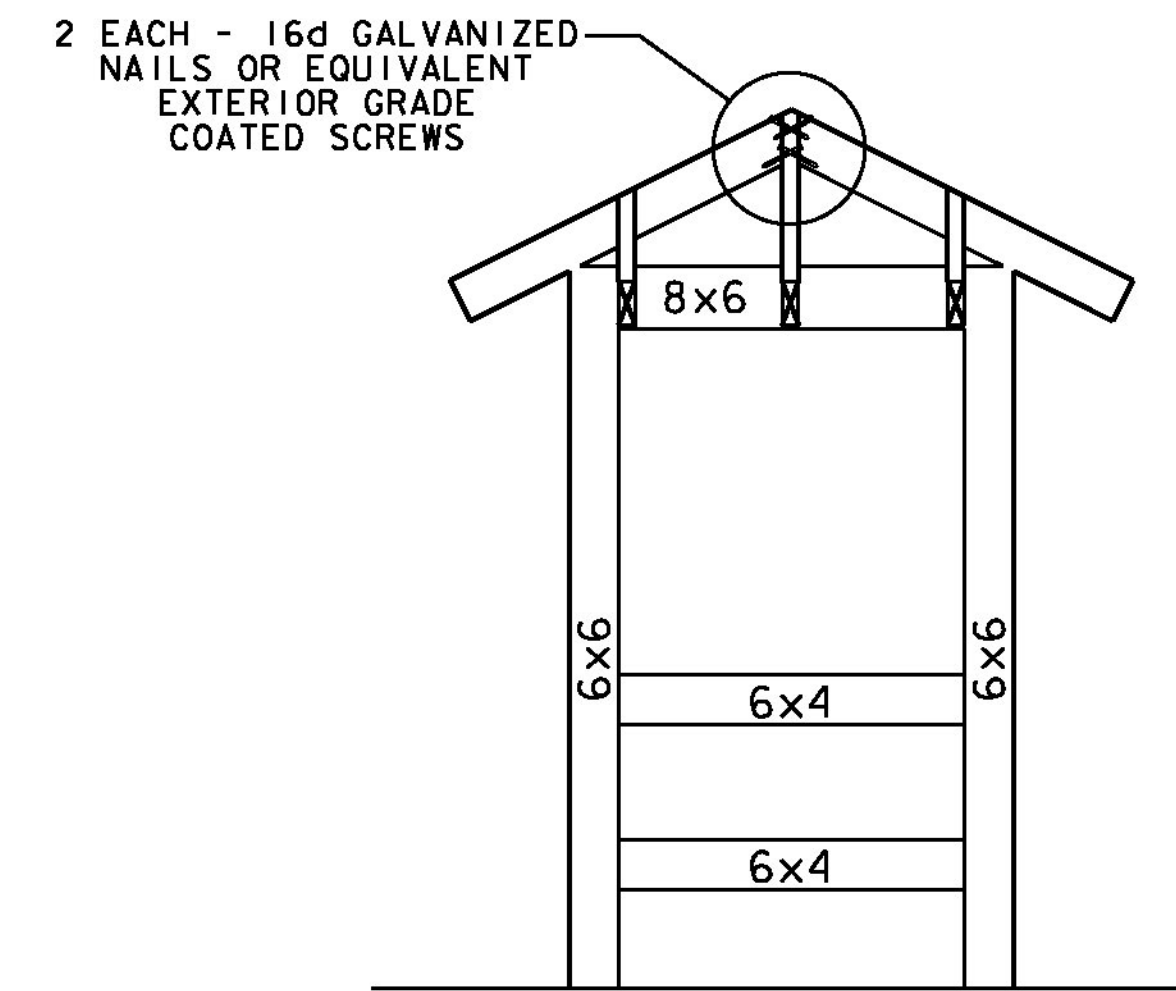
**END ELEVATION (TYP.)**  
SCALE: 1/2" = 1'-0"



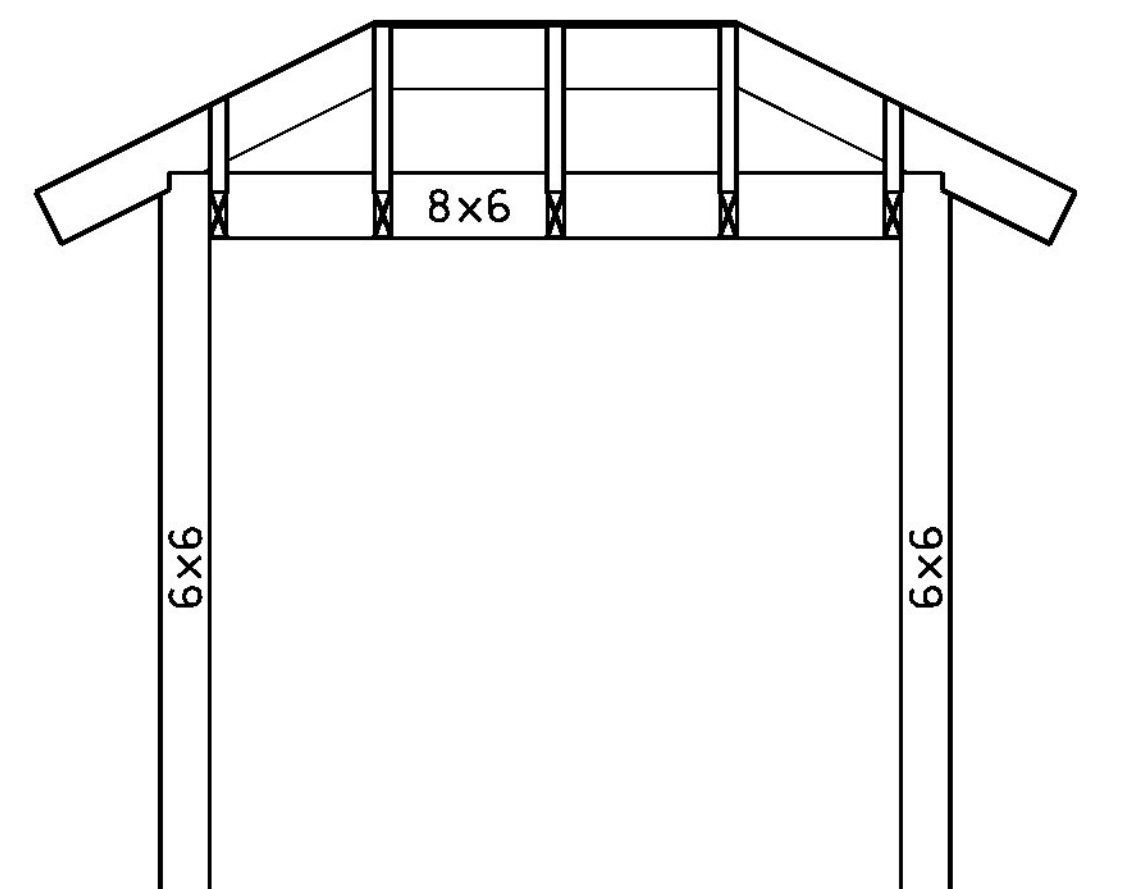
**FRONT/INTERIOR ELEVATION**  
SCALE: 1/2" = 1'-0"



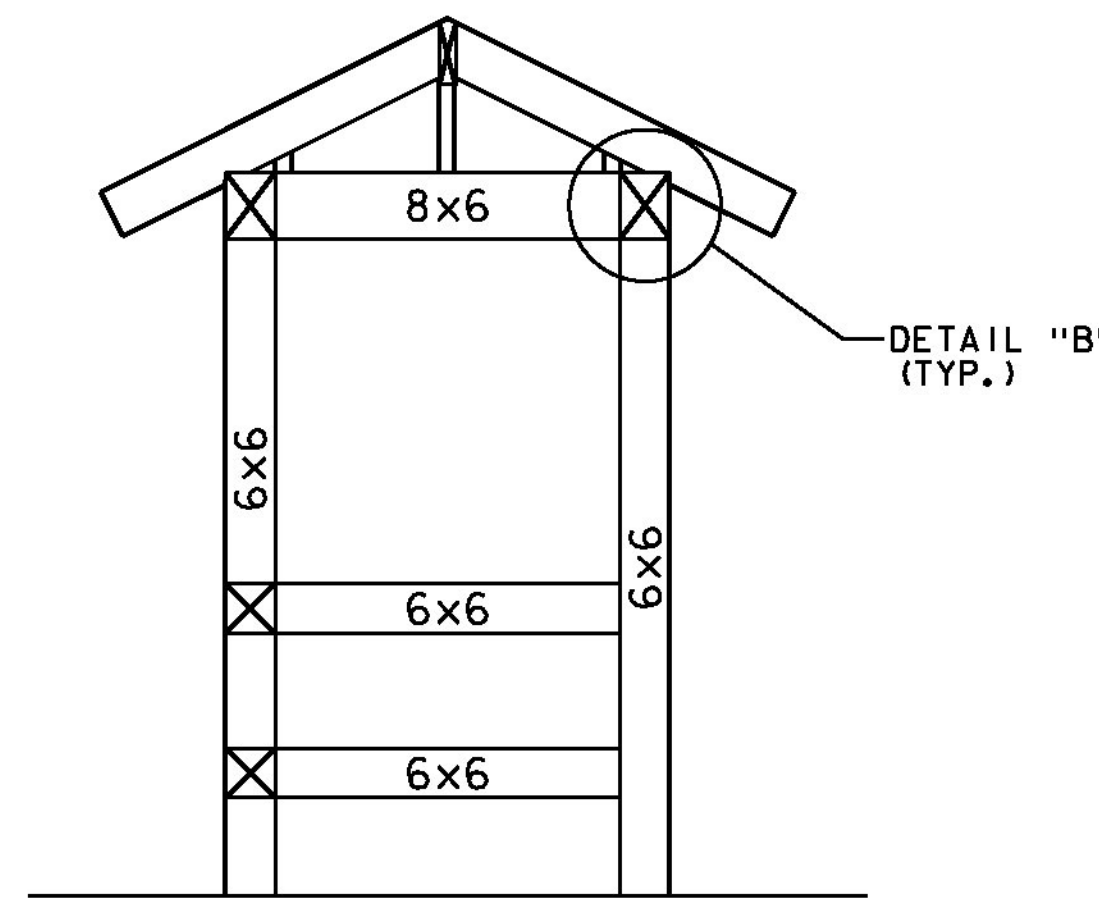
**REAR ELEVATION**  
SCALE: 1/2" = 1'-0"



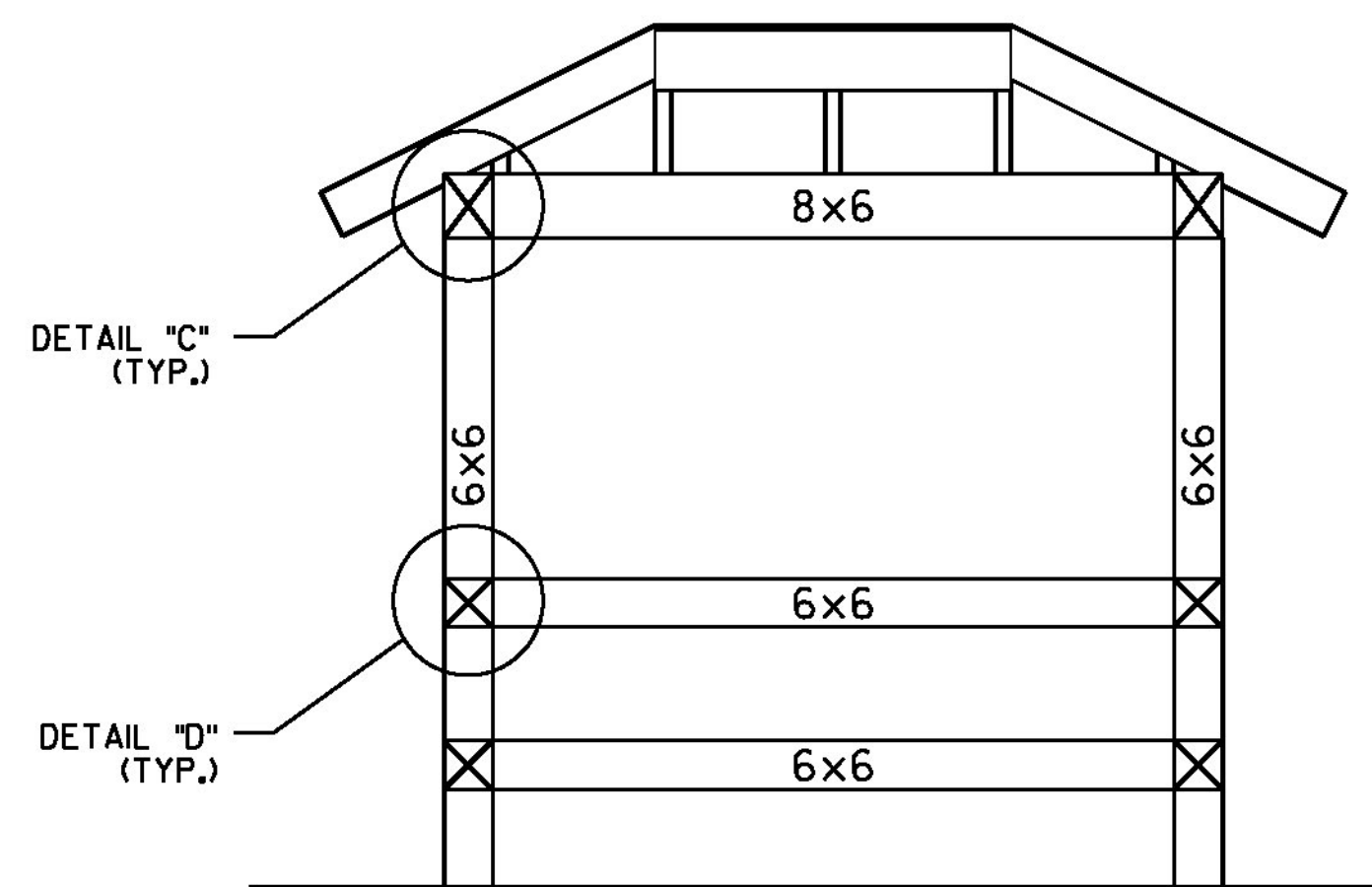
**END FRAMING - ELEVATION**  
SCALE: 1/2" = 1'-0"



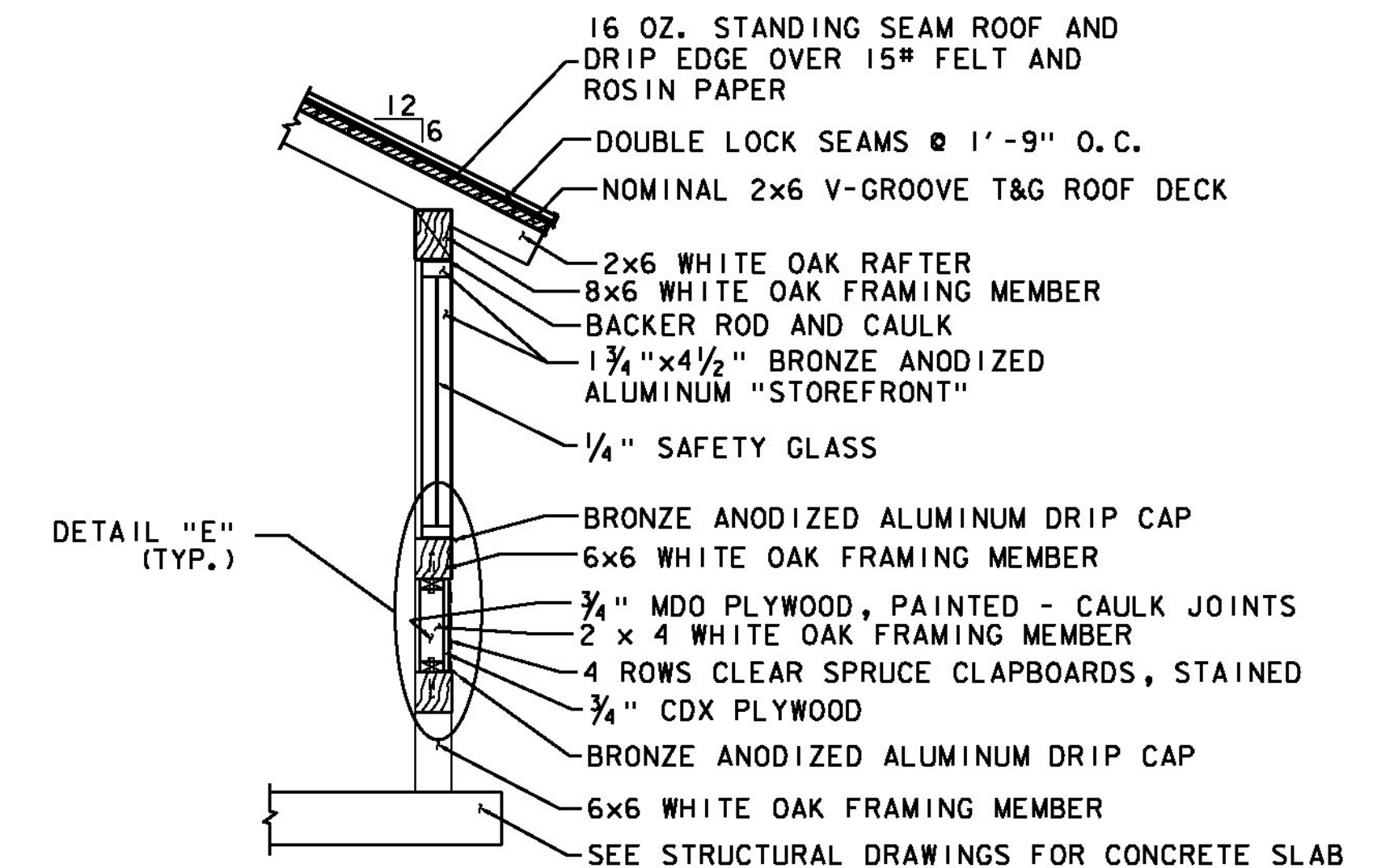
**FRONT/REAR FRAMING - ELEVATION**  
SCALE: 1/2" = 1'-0"



**END FRAMING - SECTION**  
SCALE: 1/2" = 1'-0"

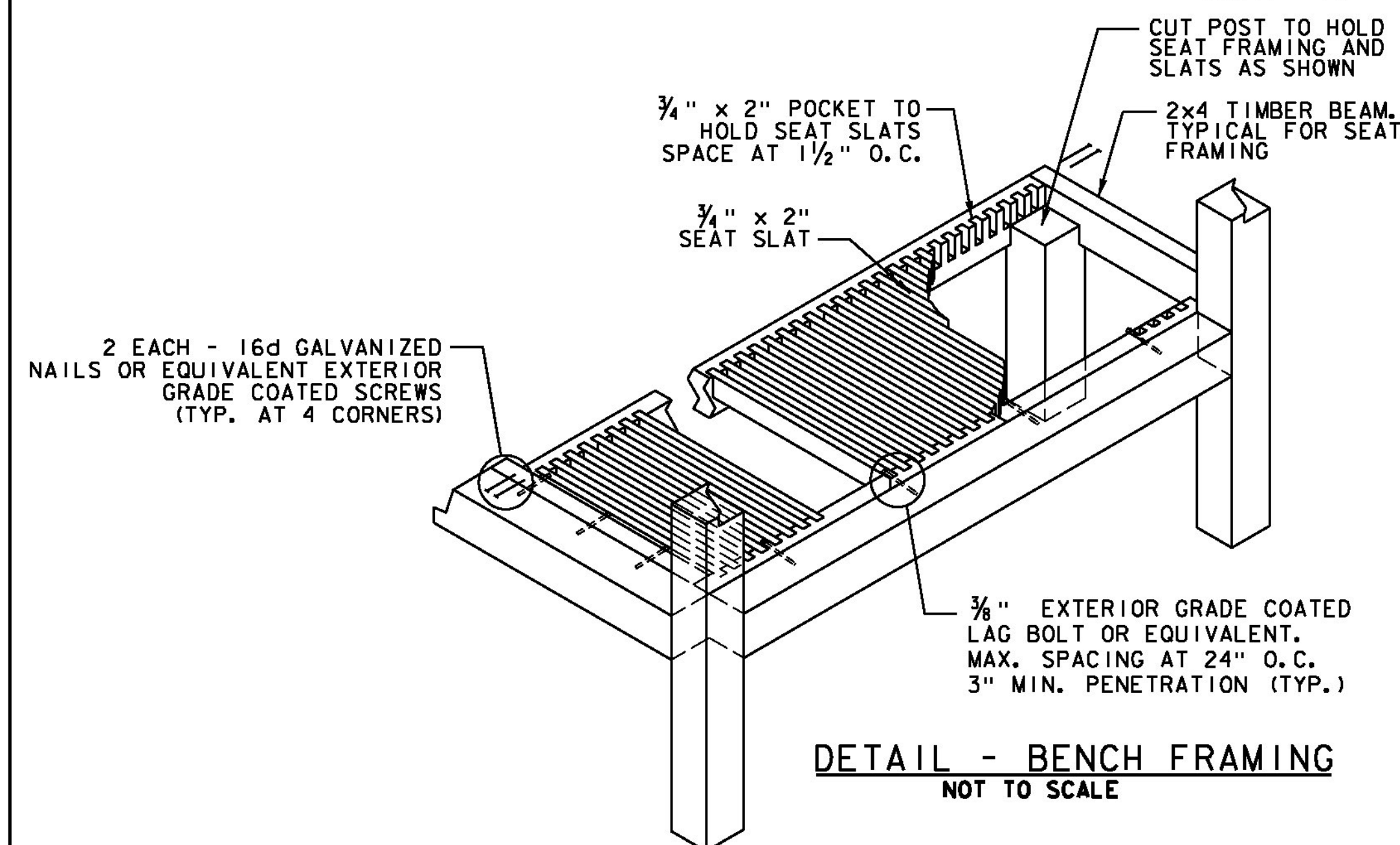


**FRONT/REAR FRAMING - SECTION**  
SCALE: 1/2" = 1'-0"



**TYPICAL WALL SECTION**  
SCALE: 1/2" = 1'-0"

- NOTES**
1. JACK AND COMMON RAFTERS ARE 2x6.
  2. HIP RAFTERS ARE 2x7
  3. RIDGE BEAM IS 2x8

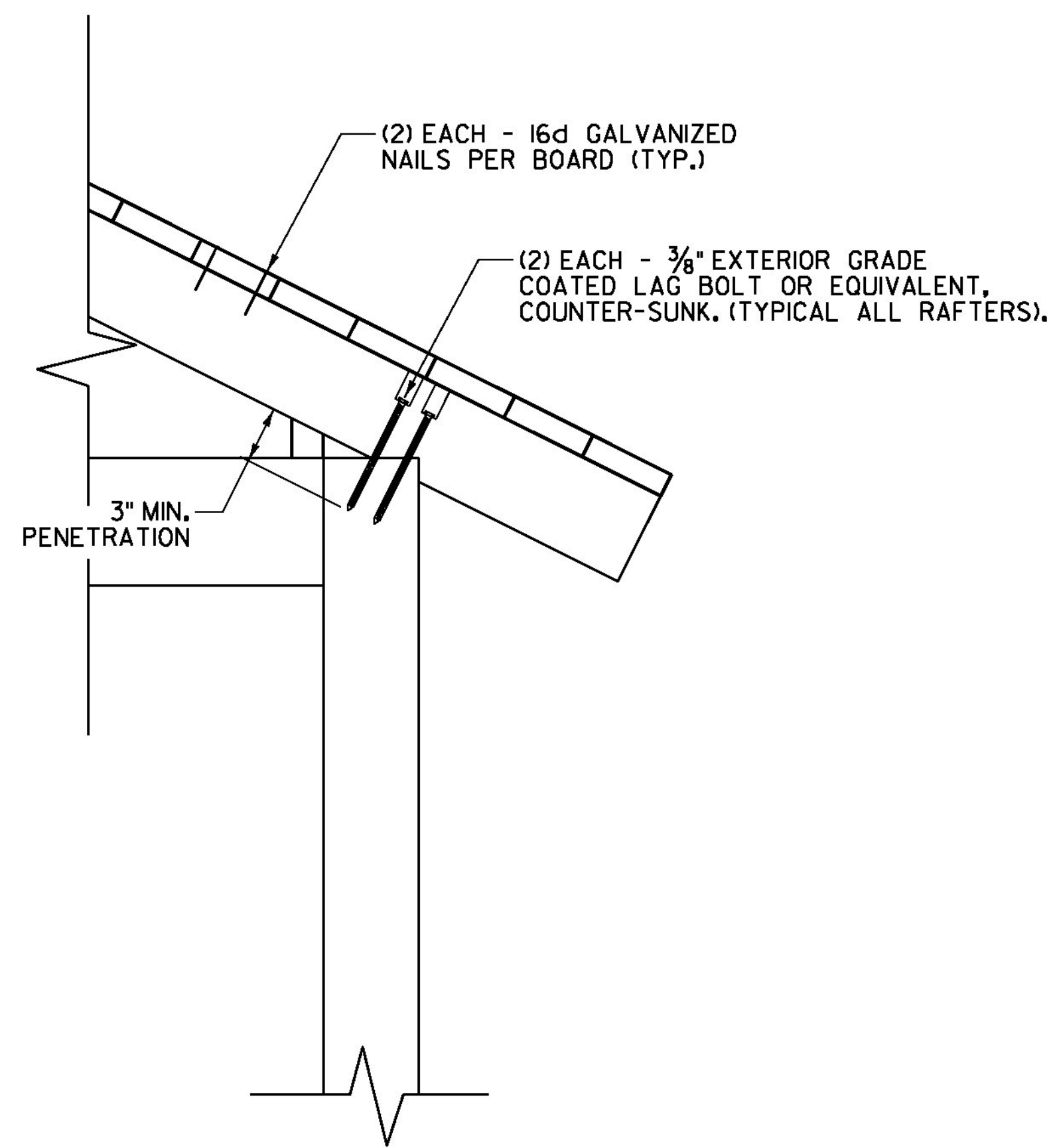


**NOTE:**  
FOR DETAILS B & C, SEE BUSH SHELTER DETAILS 3.  
FOR DETAILS D & E, SEE BUS SHELTER DETAILS 4.  
ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED.

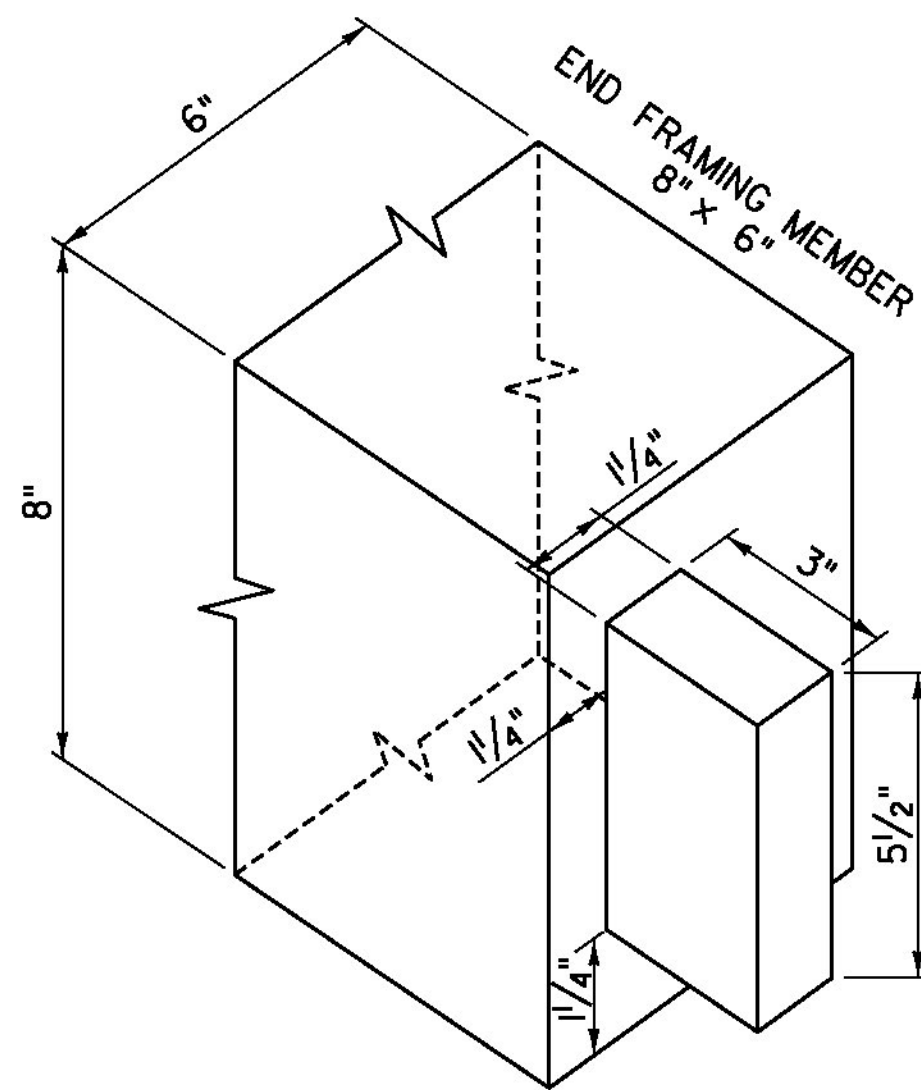
PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09k250shitr\_def.dgn PLOT DATE: 6/25/2014  
PROJECT LEADER: M. FOISY DRAWN BY: L. BUXTON  
DESIGNED BY: J. HUNGERFORD CHECKED BY: G. BOGUE  
BUS SHELTER DETAILS 2 SHEET 26 OF 43

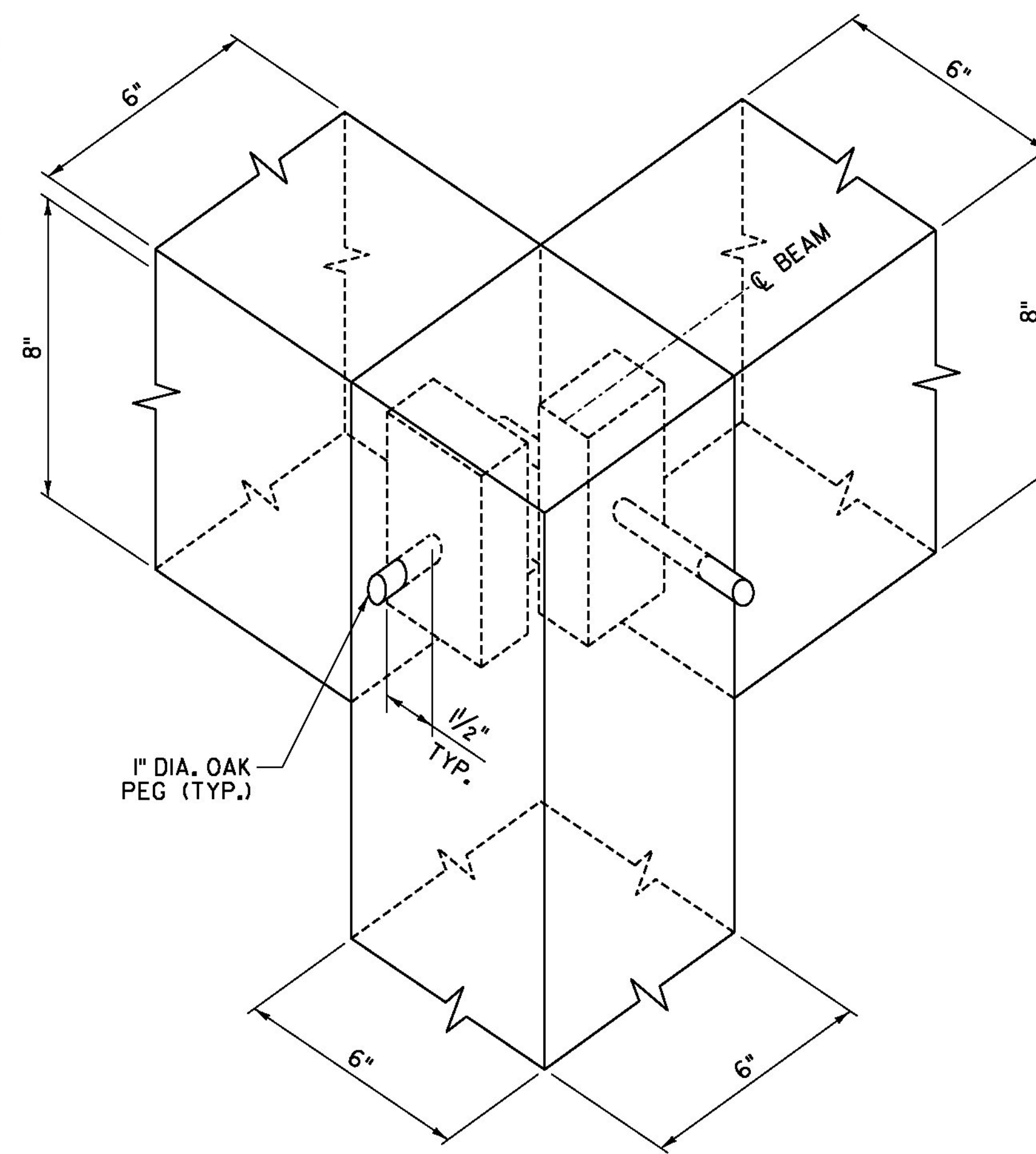




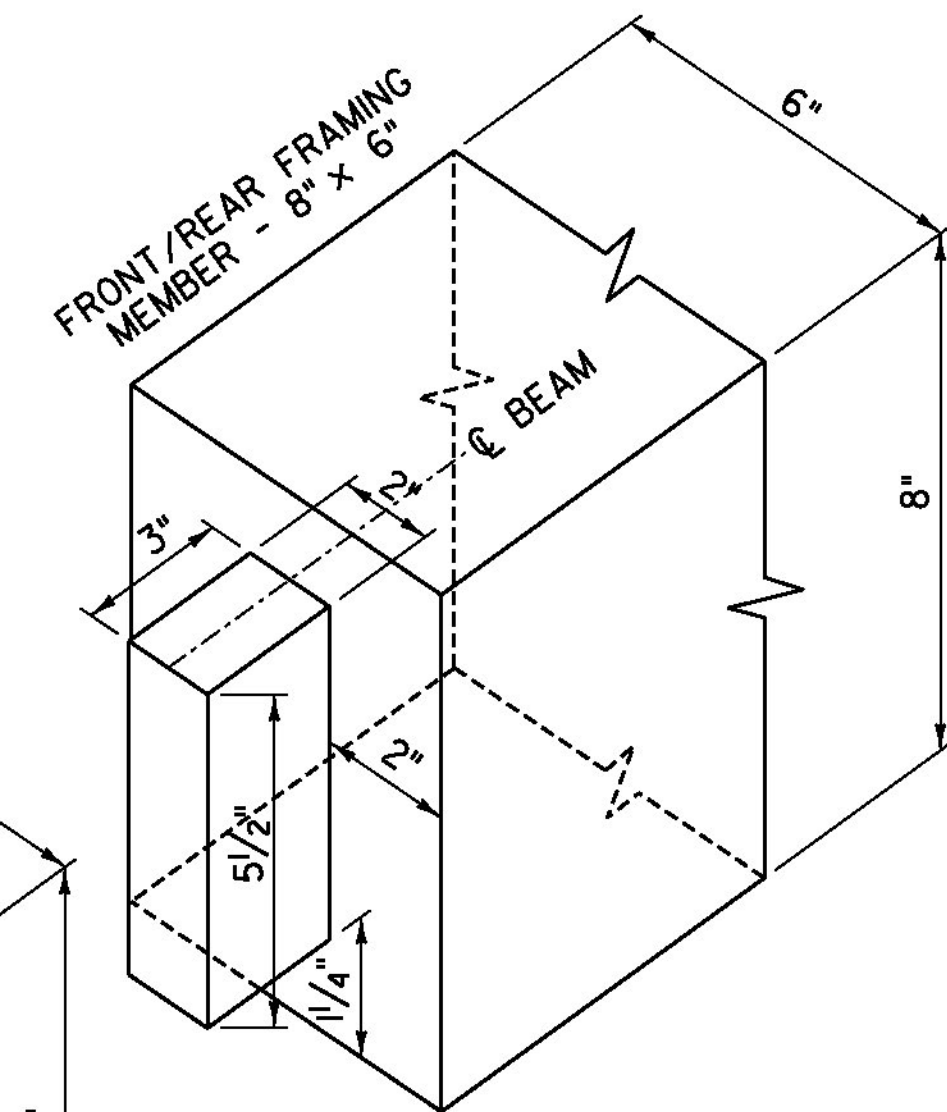
DETAIL "B"  
SCALE 1/2" = 1'-0"



MORTISE & TENON  
DETAIL



DETAIL "C"  
SCALE 1/2" = 1'-0"

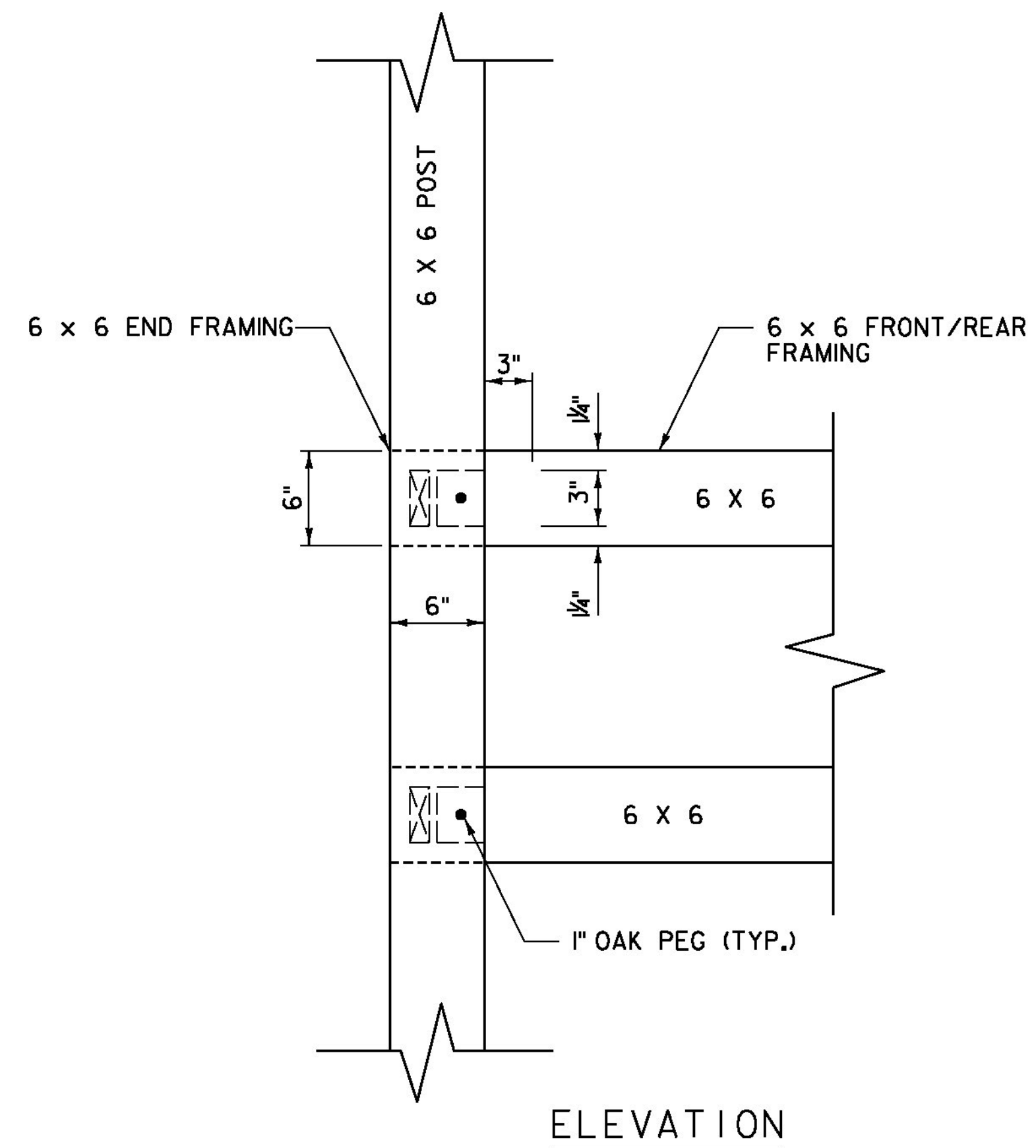
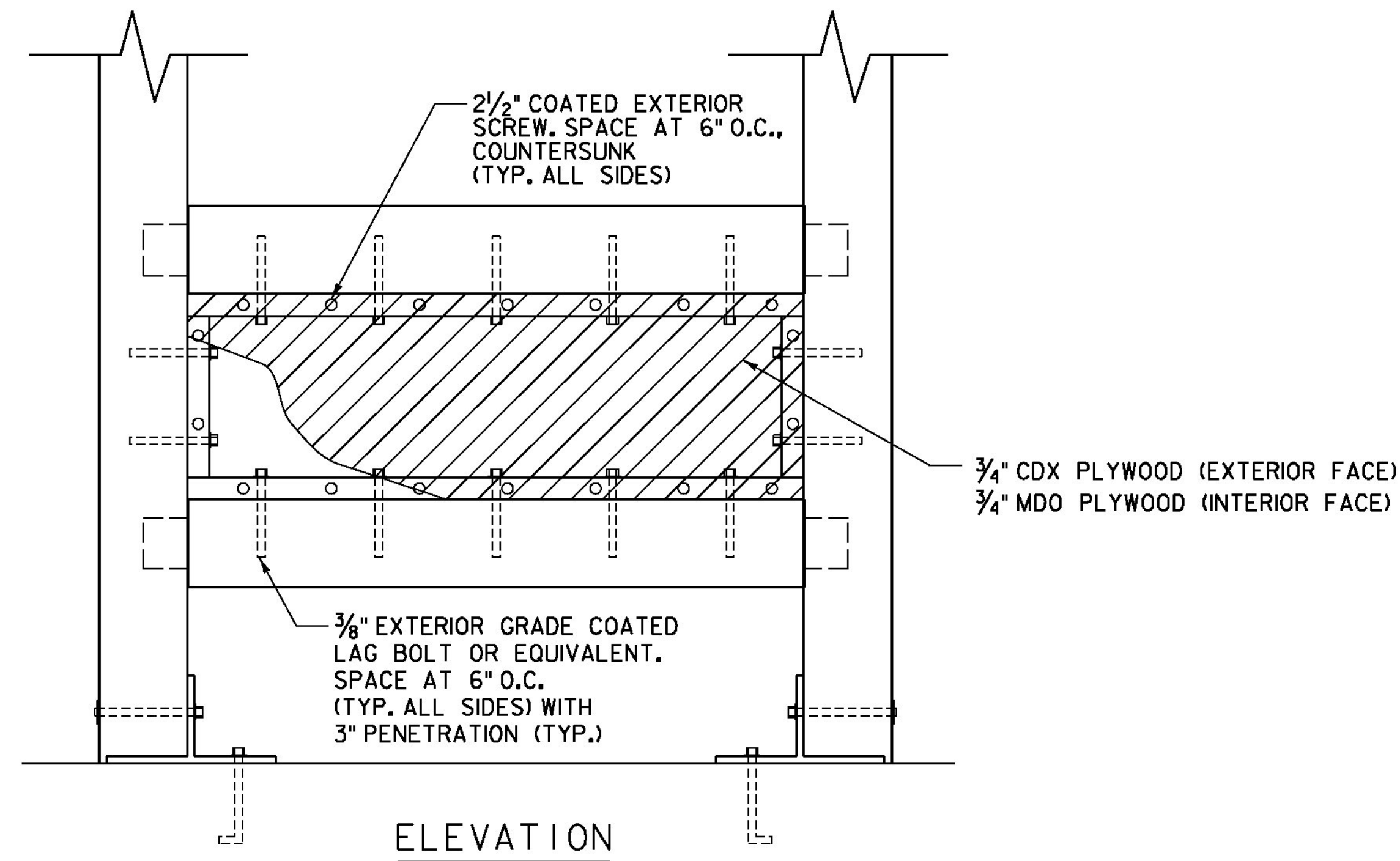
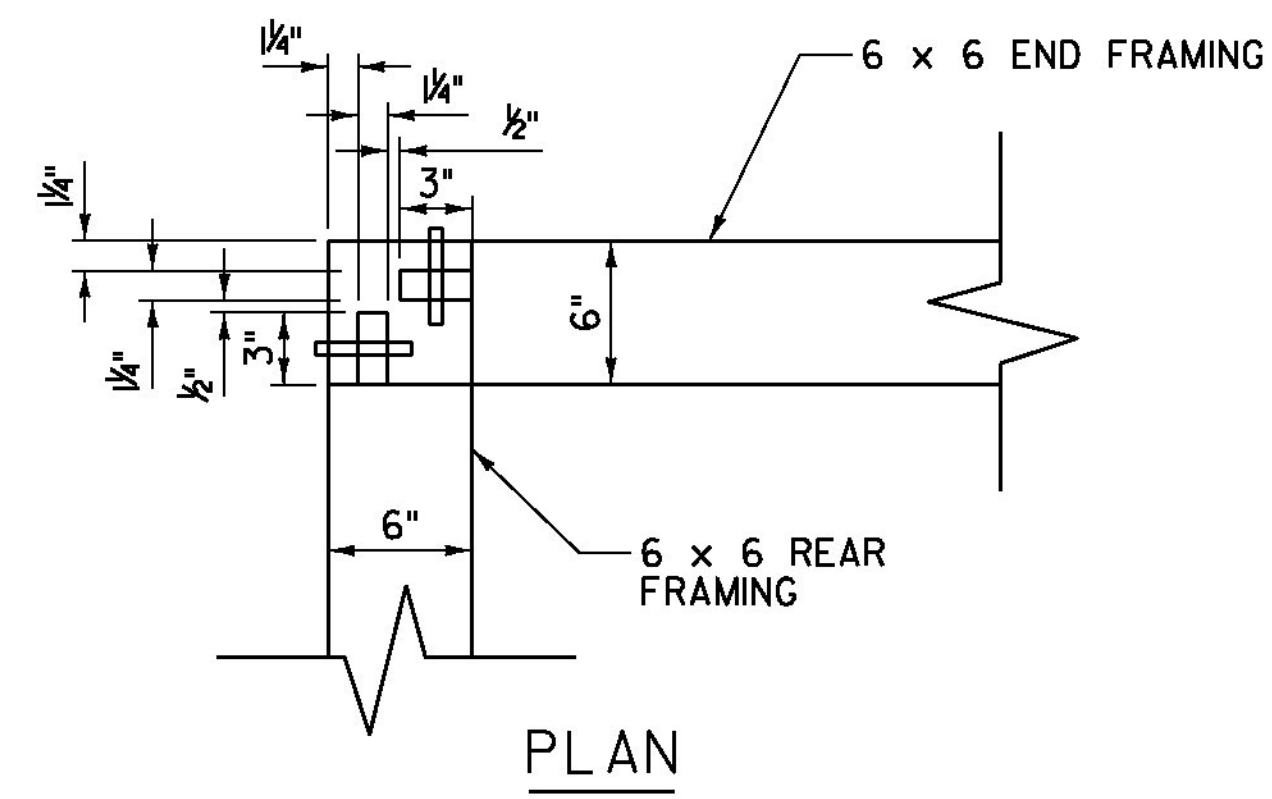


MORTISE & TENON  
DETAIL

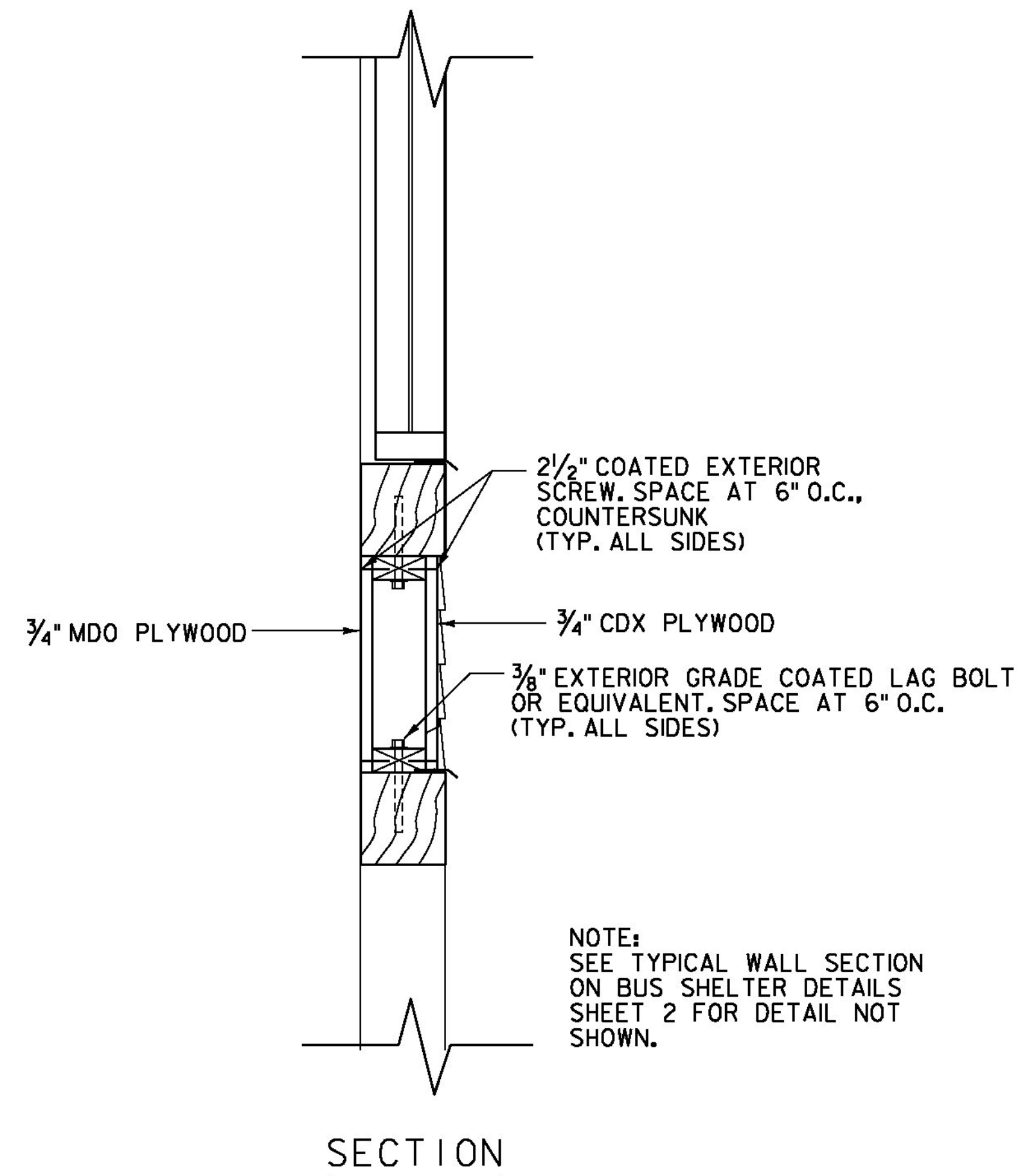
PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09k250shitr\_def.dgn PLOT DATE: 6/25/2014  
PROJECT LEADER: M. FOISY DRAWN BY: L. BUXTON  
DESIGNED BY: J. HUNGERFORD CHECKED BY: G. BOGUE  
BUS SHELTER DETAILS 3 SHEET 27 OF 43





DETAIL "D"  
SCALE 1 1/2" = 1'-0"



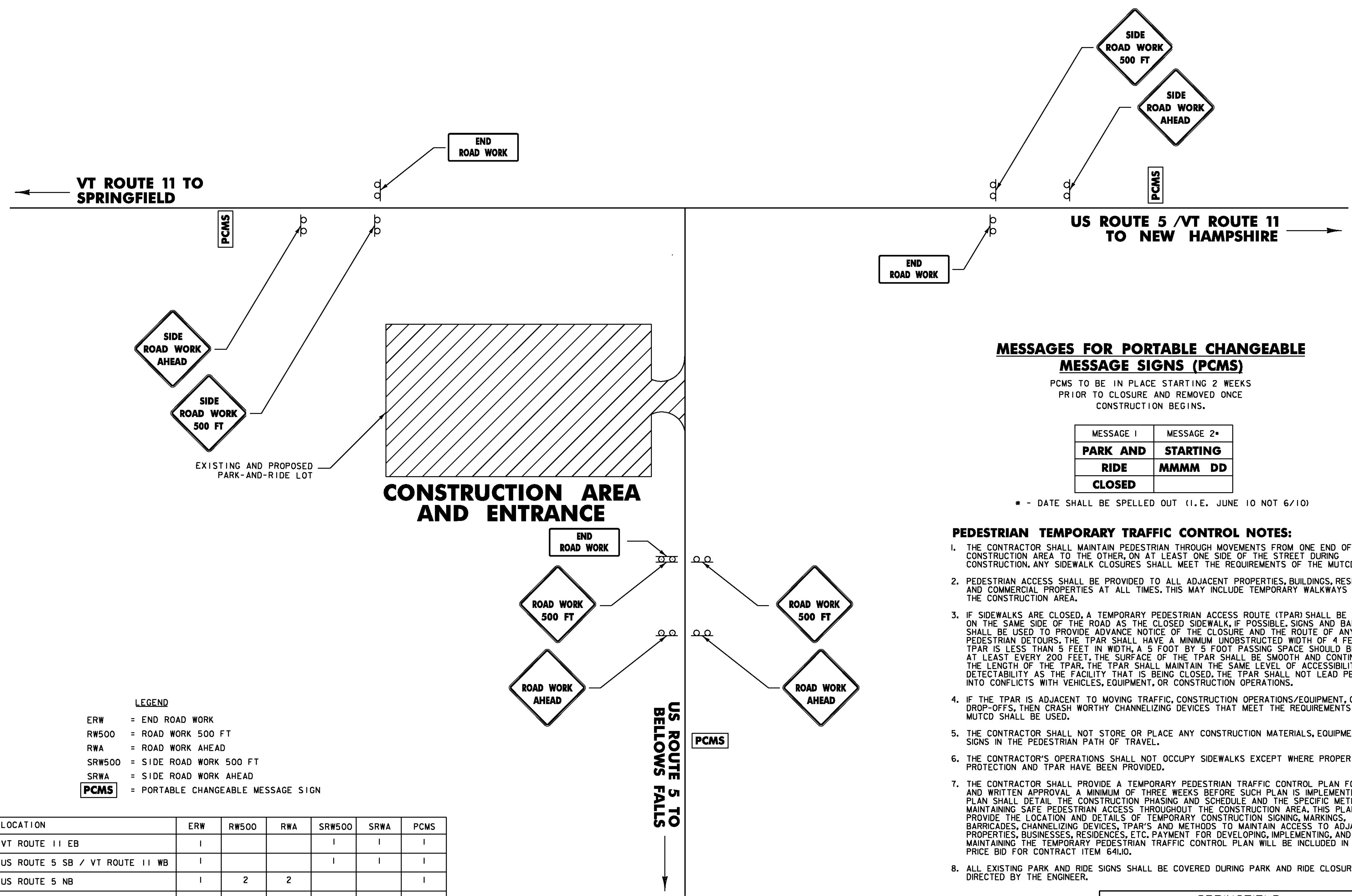
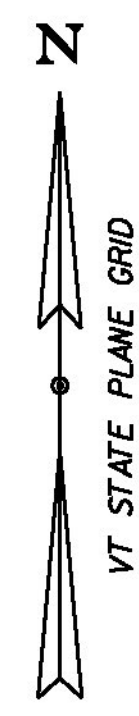
DETAIL "E"  
SCALE 1 1/2" = 1'-0"

ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED.

PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09k250shitr\_def.dgn PLOT DATE: 6/25/2014  
PROJECT LEADER: M. FOISY DRAWN BY: L. BUXTON  
DESIGNED BY: J. HUNGERFORD CHECKED BY: G. BOGUE  
BUS SHELTER DETAILS 4 SHEET 28 OF 43





**MESSAGES FOR PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)**

PCMS TO BE IN PLACE STARTING 2 WEEKS PRIOR TO CLOSURE AND REMOVED ONCE CONSTRUCTION BEGINS.

MESSAGE 1	MESSAGE 2*
<b>PARK AND RIDE CLOSED</b>	<b>STARTING MMMM DD</b>

\* - DATE SHALL BE SPELLED OUT (I.E. JUNE 10 NOT 6/10)

**PEDESTRIAN TEMPORARY TRAFFIC CONTROL NOTES:**

1. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN THROUGH MOVEMENTS FROM ONE END OF THE CONSTRUCTION AREA TO THE OTHER, ON AT LEAST ONE SIDE OF THE STREET DURING CONSTRUCTION. ANY SIDEWALK CLOSURES SHALL MEET THE REQUIREMENTS OF THE MUTCD, PART 6.
2. PEDESTRIAN ACCESS SHALL BE PROVIDED TO ALL ADJACENT PROPERTIES, BUILDINGS, RESIDENCES AND COMMERCIAL PROPERTIES AT ALL TIMES. THIS MAY INCLUDE TEMPORARY WALKWAYS SPANNING THE CONSTRUCTION AREA.
3. IF SIDEWALKS ARE CLOSED, A TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) SHALL BE PROVIDED ON THE SAME SIDE OF THE ROAD AS THE CLOSED SIDEWALK, IF POSSIBLE. SIGNS AND BARRICADES SHALL BE USED TO PROVIDE ADVANCE NOTICE OF THE CLOSURE AND THE ROUTE OF ANY PEDESTRIAN DETOURS. THE TPAR SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4 FEET. IF THE TPAR IS LESS THAN 5 FEET IN WIDTH, A 5 FOOT BY 5 FOOT PASSING SPACE SHOULD BE PROVIDED AT LEAST EVERY 200 FEET. THE SURFACE OF THE TPAR SHALL BE SMOOTH AND CONTINUOUS FOR THE LENGTH OF THE TPAR. THE TPAR SHALL MAINTAIN THE SAME LEVEL OF ACCESSIBILITY AND DETECTABILITY AS THE FACILITY THAT IS BEING CLOSED. THE TPAR SHALL NOT LEAD PEDESTRIANS INTO CONFLICTS WITH VEHICLES, EQUIPMENT, OR CONSTRUCTION OPERATIONS.
4. IF THE TPAR IS ADJACENT TO MOVING TRAFFIC, CONSTRUCTION OPERATIONS/EQUIPMENT, OR DROP-OFFS, THEN CRASH WORTHY CHANNELIZING DEVICES THAT MEET THE REQUIREMENTS OF THE MUTCD SHALL BE USED.
5. THE CONTRACTOR SHALL NOT STORE OR PLACE ANY CONSTRUCTION MATERIALS, EQUIPMENT OR SIGNS IN THE PEDESTRIAN PATH OF TRAVEL.
6. THE CONTRACTOR'S OPERATIONS SHALL NOT OCCUPY SIDEWALKS EXCEPT WHERE PROPER PROTECTION AND TPAR HAVE BEEN PROVIDED.
7. THE CONTRACTOR SHALL PROVIDE A TEMPORARY PEDESTRIAN TRAFFIC CONTROL PLAN FOR REVIEW AND WRITTEN APPROVAL A MINIMUM OF THREE WEEKS BEFORE SUCH PLAN IS IMPLEMENTED. THIS PLAN SHALL DETAIL THE CONSTRUCTION PHASING AND SCHEDULE AND THE SPECIFIC METHODS OF MAINTAINING SAFE PEDESTRIAN ACCESS THROUGHOUT THE CONSTRUCTION AREA. THIS PLAN SHALL PROVIDE THE LOCATION AND DETAILS OF TEMPORARY CONSTRUCTION SIGNING, MARKINGS, BARRICADES, CHANNELIZING DEVICES, TPAR'S AND METHODS TO MAINTAIN ACCESS TO ADJACENT PROPERTIES, BUSINESSES, RESIDENCES, ETC. PAYMENT FOR DEVELOPING, IMPLEMENTING, AND MAINTAINING THE TEMPORARY PEDESTRIAN TRAFFIC CONTROL PLAN WILL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 64110.
8. ALL EXISTING PARK AND RIDE SIGNS SHALL BE COVERED DURING PARK AND RIDE CLOSURE AS DIRECTED BY THE ENGINEER.

**LEGEND**  
 ERW = END ROAD WORK  
 RW500 = ROAD WORK 500 FT  
 RWA = ROAD WORK AHEAD  
 SRW500 = SIDE ROAD WORK 500 FT  
 SRWA = SIDE ROAD WORK AHEAD  
 PCMS = PORTABLE CHANGEABLE MESSAGE SIGN

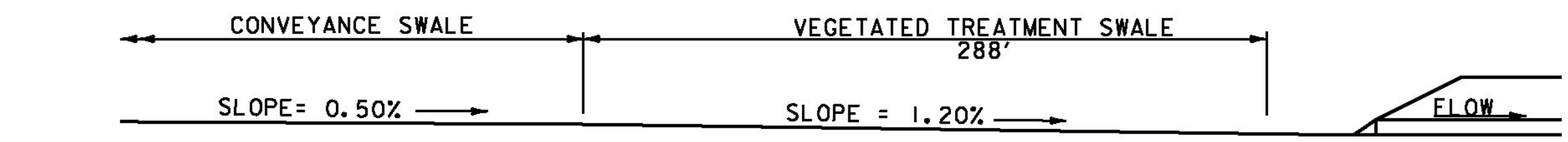
LOCATION	ERW	RW500	RWA	SRW500	SRWA	PCMS
VT ROUTE 11 EB	1			1	1	1
US ROUTE 5 SB / VT ROUTE 11 WB	1			1	1	1
US ROUTE 5 NB	1	2	2			1
TOTALS	3	2	2	2	2	3

**CONSTRUCTION APPROACH SIGNING**

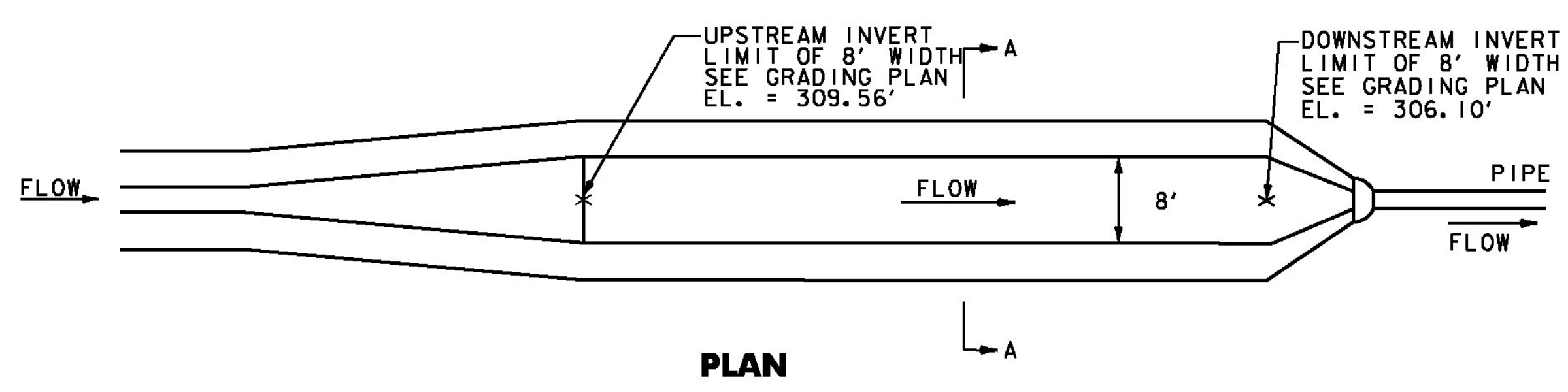
NOT TO SCALE  
 SEE VTrans STANDARDS T-1, T-10, T-30 FOR SIGN PLACEMENT.

PROJECT NAME:	SPRINGFIELD
PROJECT NUMBER:	CMG PARK (32)
FILE NAME:	z09k250+yp.dgn
PROJECT LEADER:	G. SANTY
DESIGNED BY:	I. MAYNARD
CONSTRUCTION APPROACH SIGNING	
PLOT DATE:	6/25/2014
DRAWN BY:	I. MAYNARD
CHECKED BY:	M. FOISY
SHEET	29 OF 43

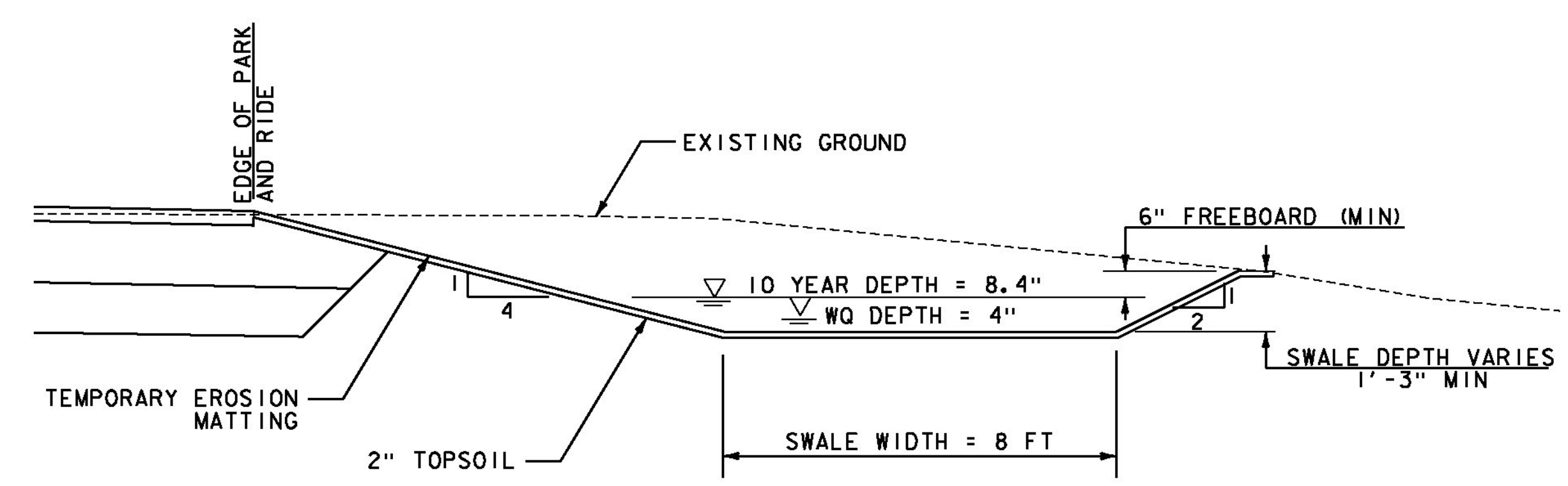




**ELEVATION**



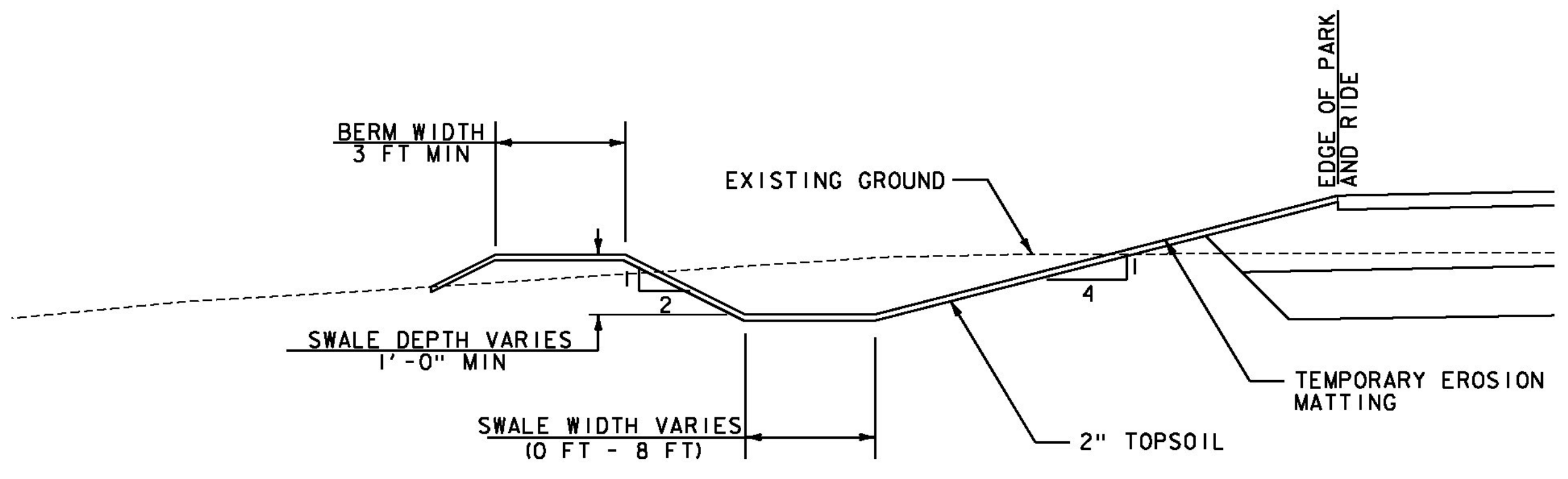
**PLAN**



**SECTION A-A**

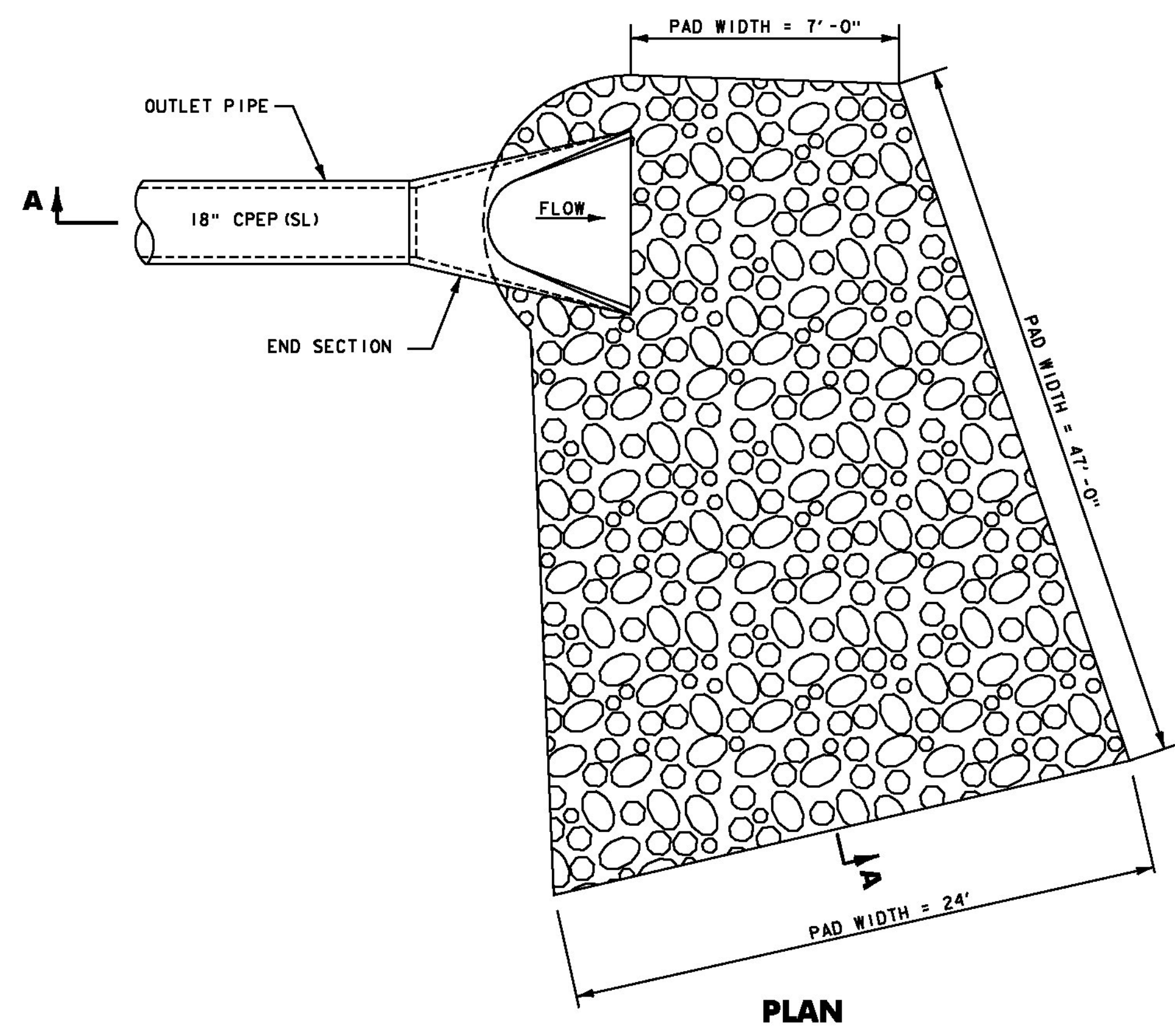
**VEGETATED TREATMENT SWALE**

N.T.S.  
SEE GRADING PLAN FOR MORE INFORMATION  
NOTES:  
1. THE EXCAVATION OF THE SWALE WILL BE PAID AS ITEM 203.15 - COMMON EXCAVATION. ALL EXCAVATION IS ACCOUNTED FOR IN THE EARTHWORKS SUMMARY SHEET.

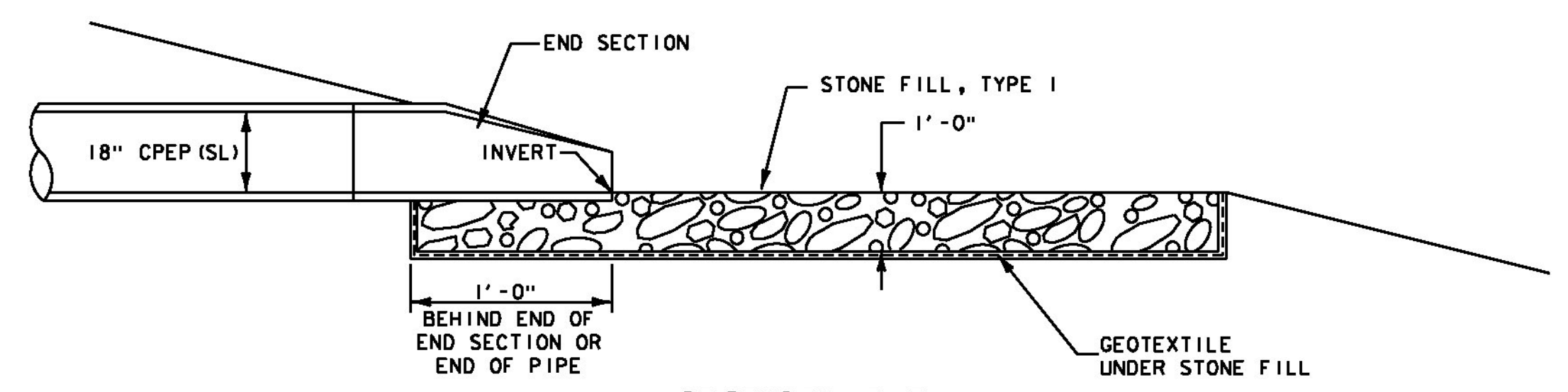


**CONVEYANCE SWALE**

N.T.S.  
SEE GRADING PLAN FOR MORE INFORMATION  
NOTES:  
1. THE EXCAVATION OF THE SWALE WILL BE PAID AS ITEM 203.15 - COMMON EXCAVATION. ALL EXCAVATION IS ACCOUNTED FOR IN THE EARTHWORKS SUMMARY SHEET.



**PLAN**

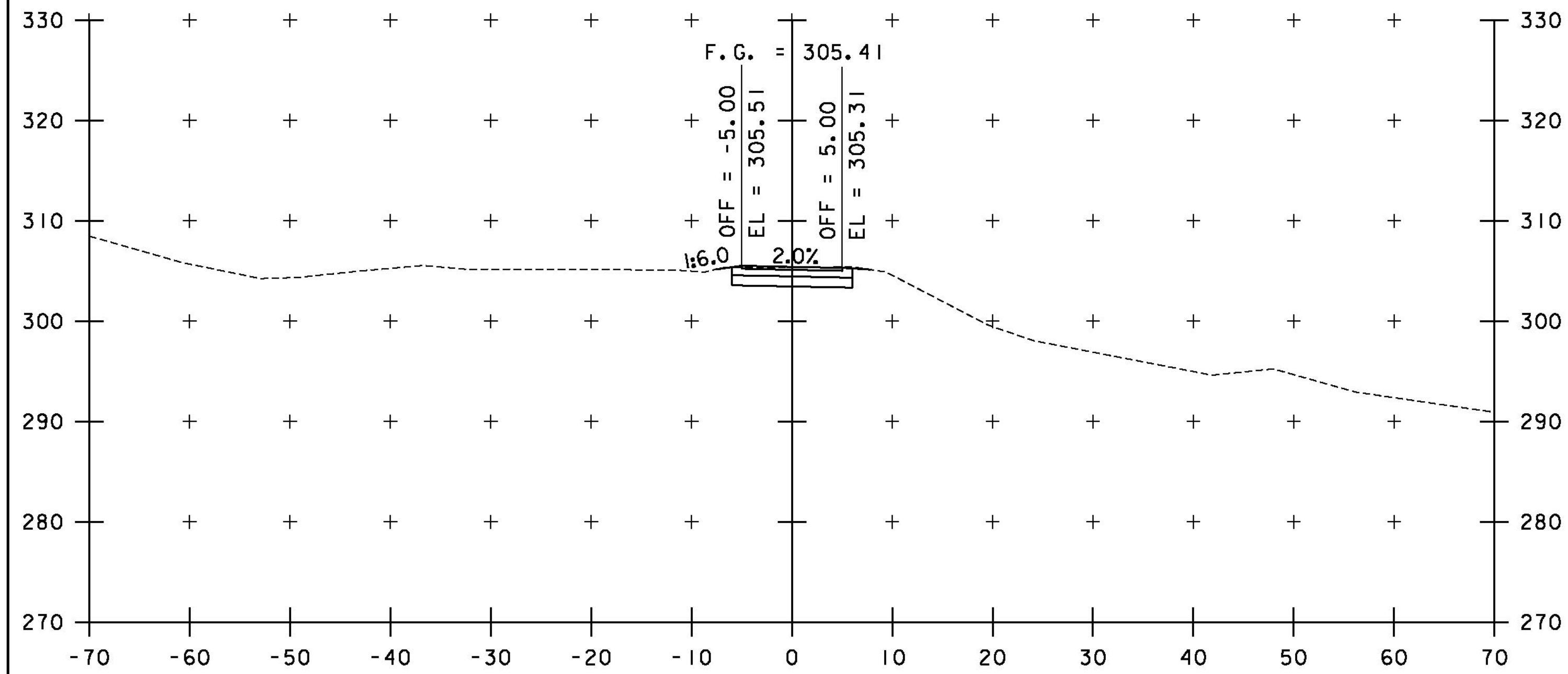


**SECTION A-A**

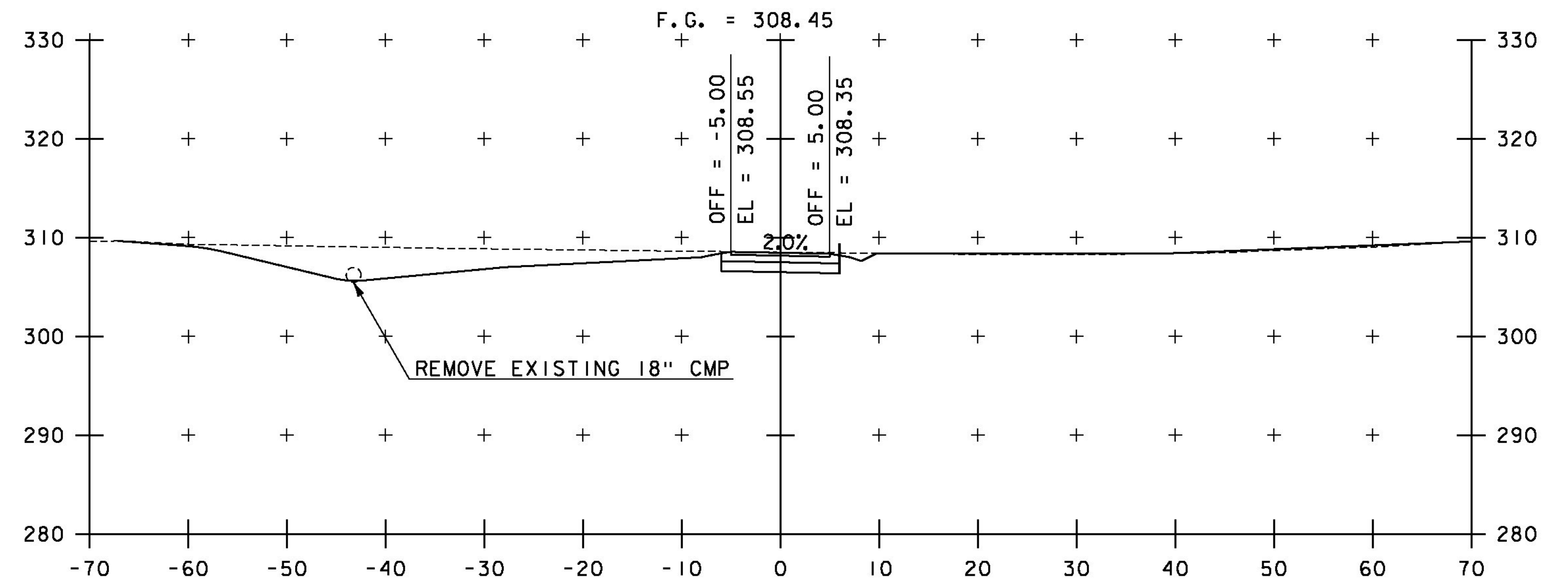
**STONE OUTLET PROTECTION**  
N.T.S.

PROJECT NAME:	SPRINGFIELD
PROJECT NUMBER:	CMG PARK (32)
FILE NAME:	z09k250+yp.dgn
PROJECT LEADER:	G. SANTY
DESIGNED BY:	I. MAYNARD
STORMWATER MANAGEMENT DETAILS	
PLOT DATE:	6/25/2014
DRAWN BY:	I. MAYNARD
CHECKED BY:	M. FOISY
SHEET	30 OF 43

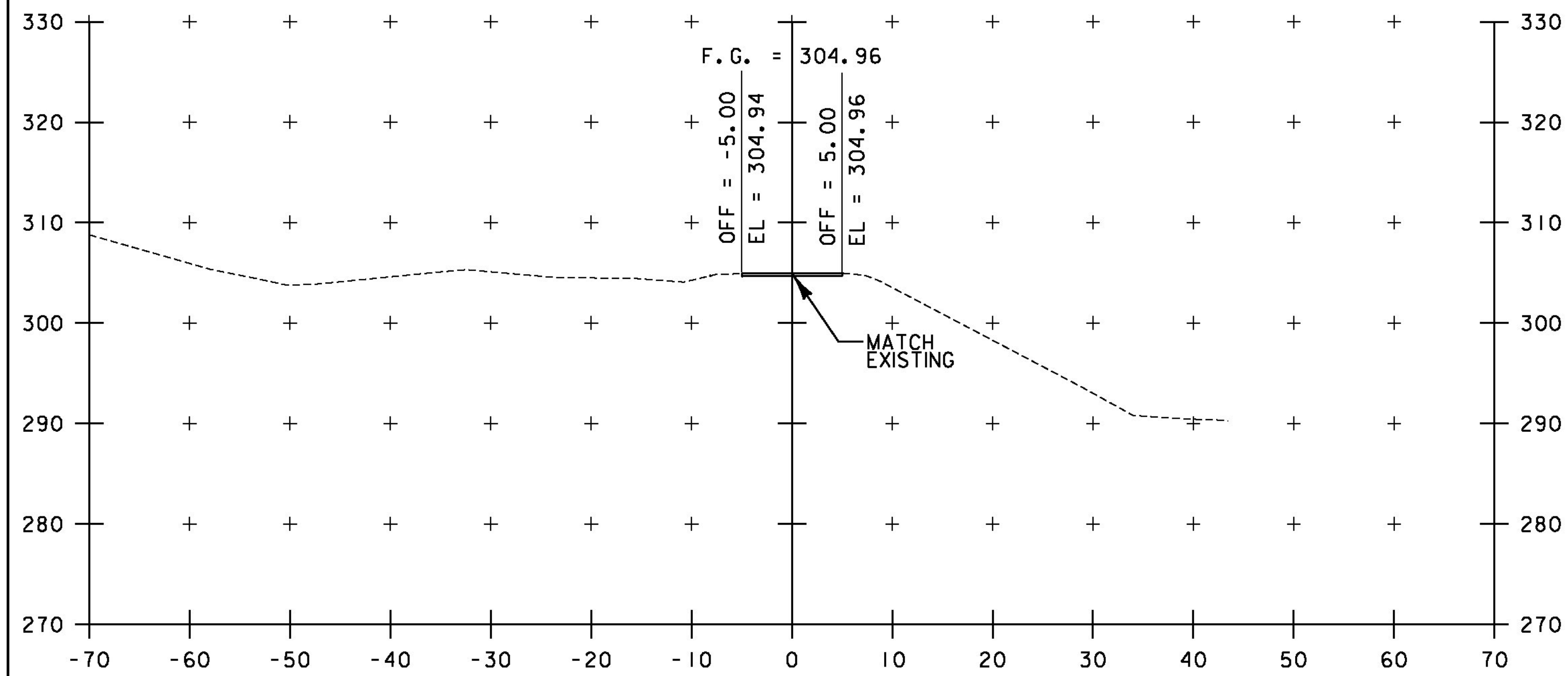




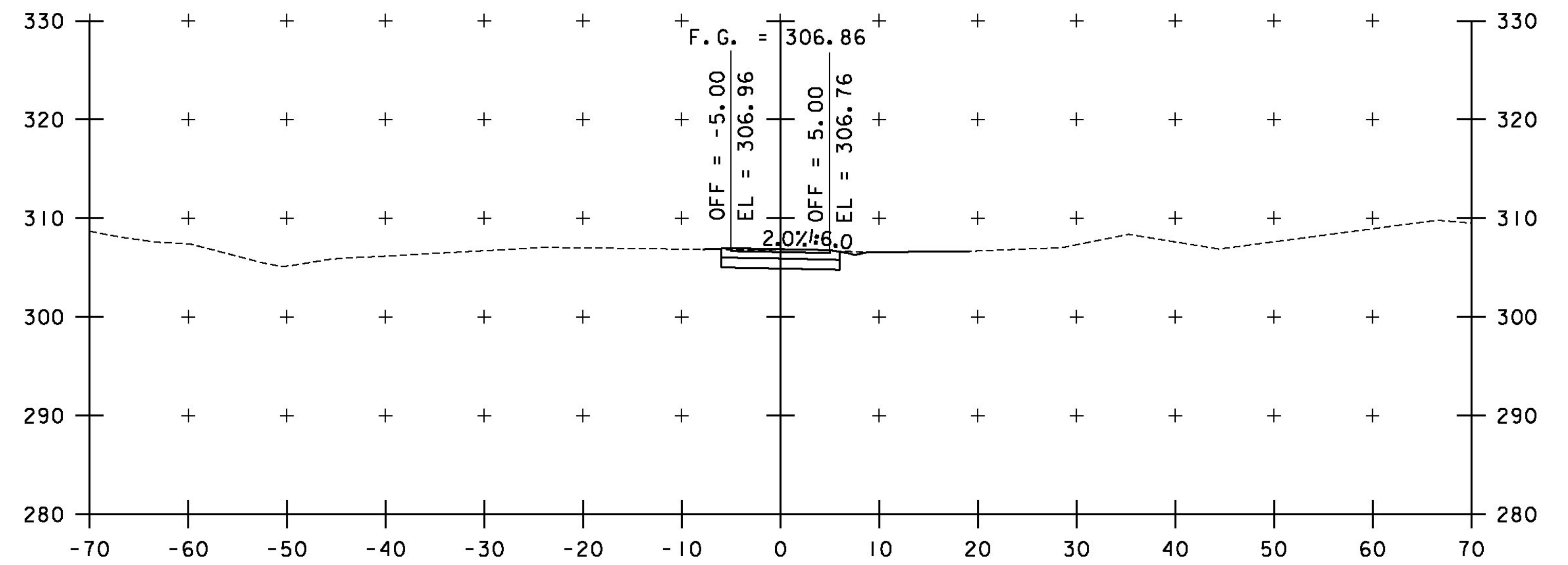
200+50



201+50



200+30  
BEGIN SHARED USE PATH



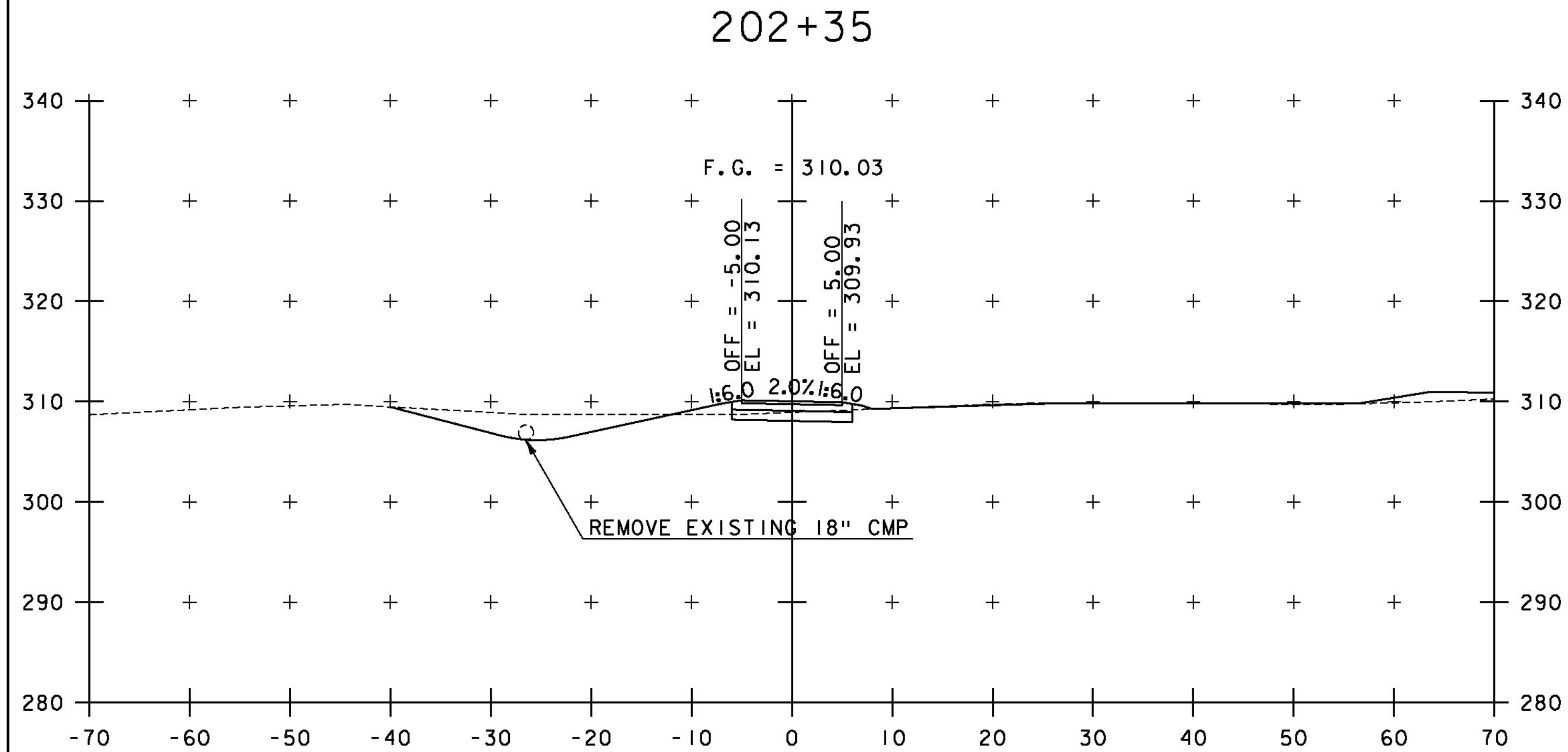
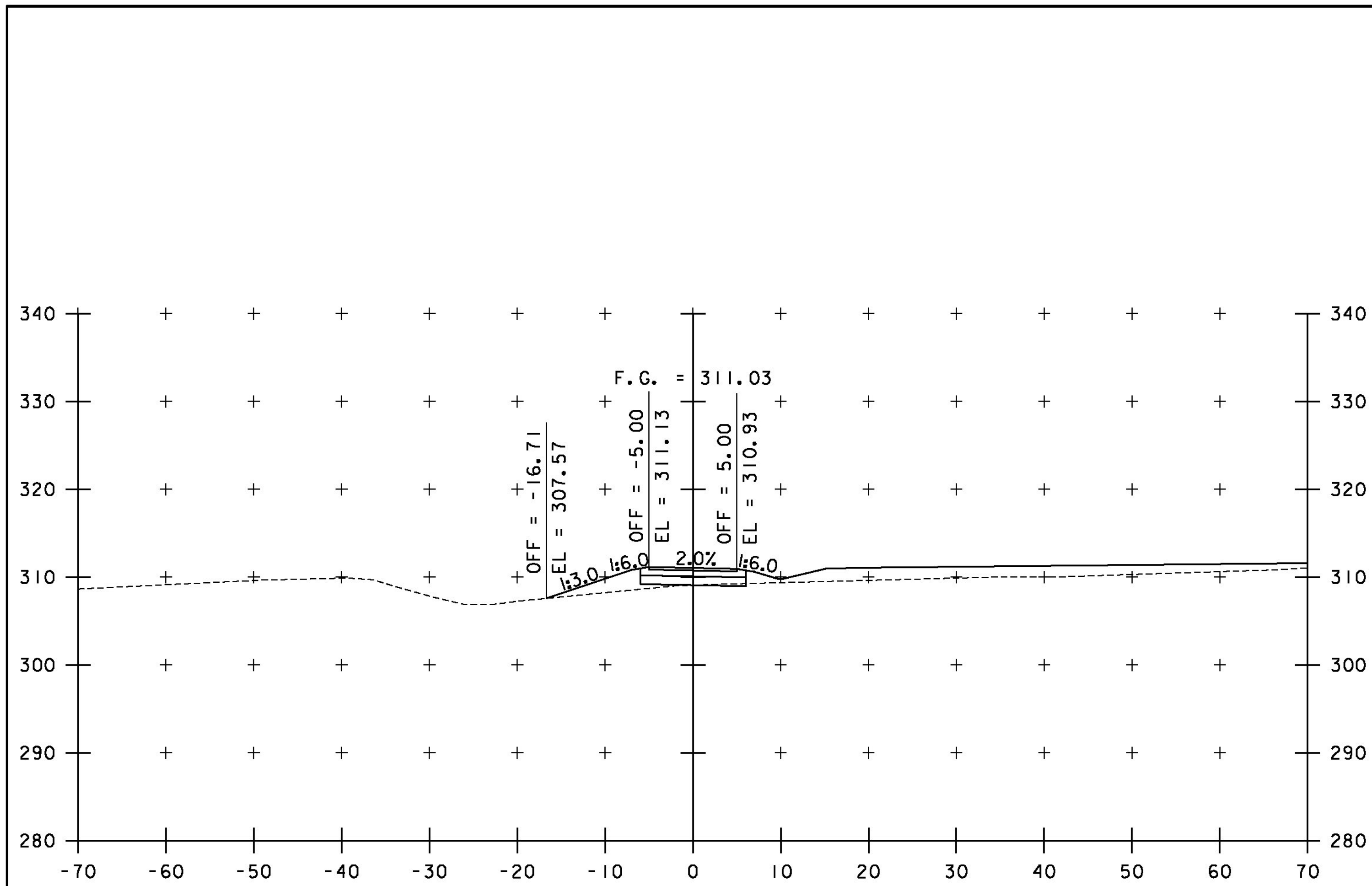
201+00

SHARED USE PATH  
STA. 200+30 TO STA. 201+50

PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09k250xs.dgn PLOT DATE: 6/25/2014  
PROJECT LEADER: G. SANTY DRAWN BY: I. MAYNARD  
DESIGNED BY: I. MAYNARD CHECKED BY: M. FOISY  
CROSS SECTION SHEET 1 SHEET 31 OF 43

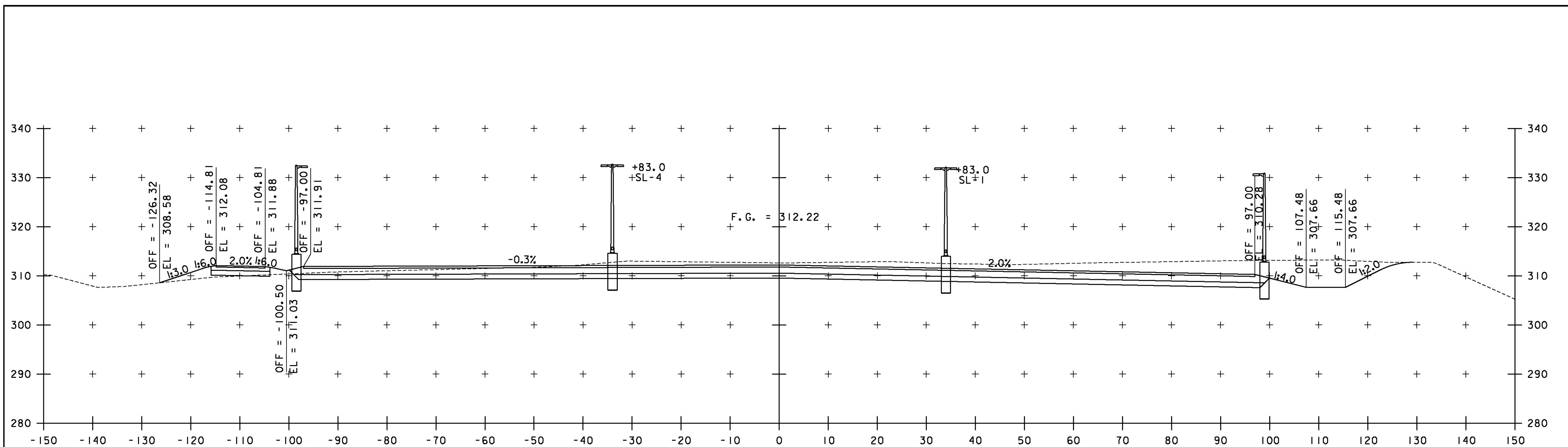




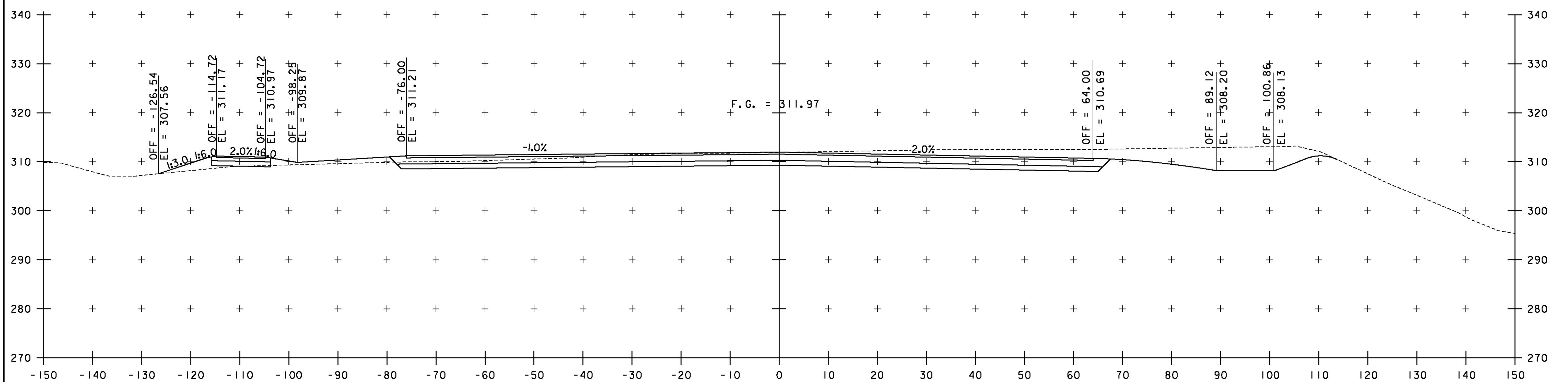
SHARED USE PATH  
 STA. 202+00 TO STA. 202+35

PROJECT NAME:	SPRINGFIELD	FILE NAME:	z09k250xs.dgn	PLOT DATE:	6/25/2014
PROJECT NUMBER:	CMG PARK (32)	PROJECT LEADER:	G. SANTY	DRAWN BY:	I. MAYNARD
		DESIGNED BY:	I. MAYNARD	CHECKED BY:	M. FOISY
		CROSS SECTION SHEET 2		SHEET	32 OF 43





102+00 = 202+85.75, 109.81 RT.

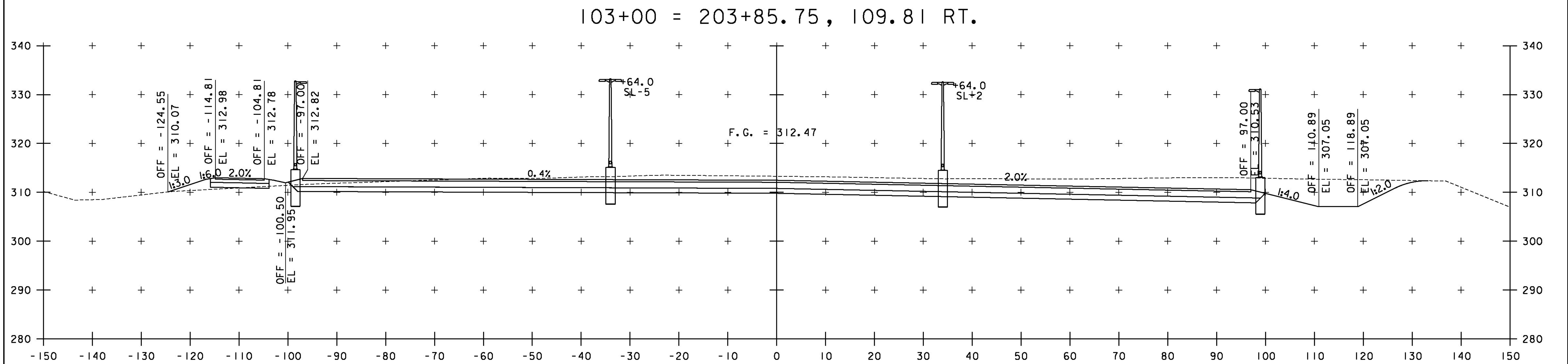
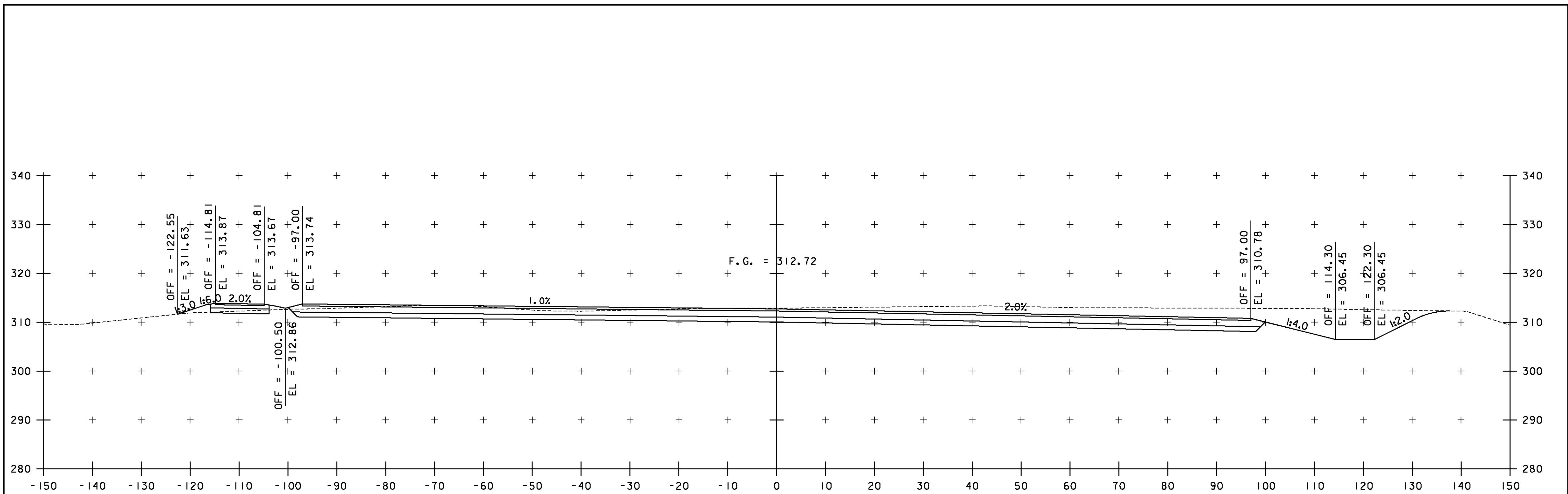


101+50 = 202+36.64, 109.72' RT.  
LIMIT OF PARK-AND-RIDE

PARK-AND-RIDE BASELINE  
STA. 101+50 TO STA. 102+00

PROJECT NAME:	SPRINGFIELD	FILE NAME:	z09k250xs.dgn	PLOT DATE:	6/25/2014
PROJECT NUMBER:	CMG PARK (32)	PROJECT LEADER:	G. SANTY	DRAWN BY:	I. MAYNARD
		DESIGNED BY:	I. MAYNARD	CHECKED BY:	M. FOISY
		CROSS SECTION SHEET 3		SHEET	33 OF 43





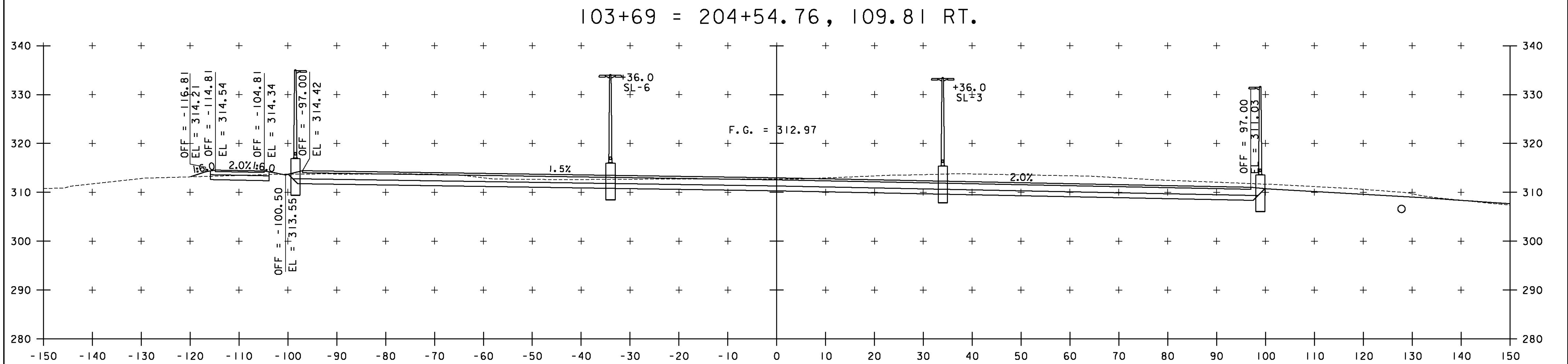
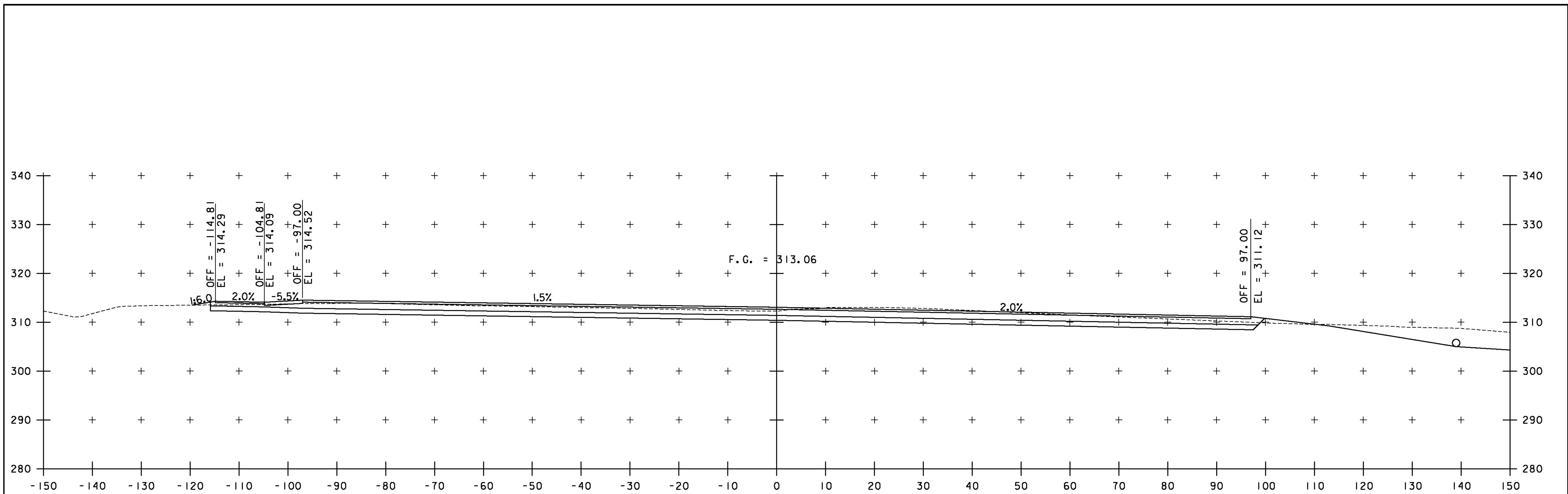
PARK-AND-RIDE BASELINE  
STA. 102+50 TO STA. 103+00

PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09k250xs.dgn  
PROJECT LEADER: G. SANTY  
DESIGNED BY: I. MAYNARD  
CROSS SECTION SHEET 4

PLOT DATE: 6/25/2014  
DRAWN BY: I. MAYNARD  
CHECKED BY: M. FOISY  
SHEET 34 OF 43





PARK-AND-RIDE BASELINE  
 STA. 103+50 TO STA. 103+69

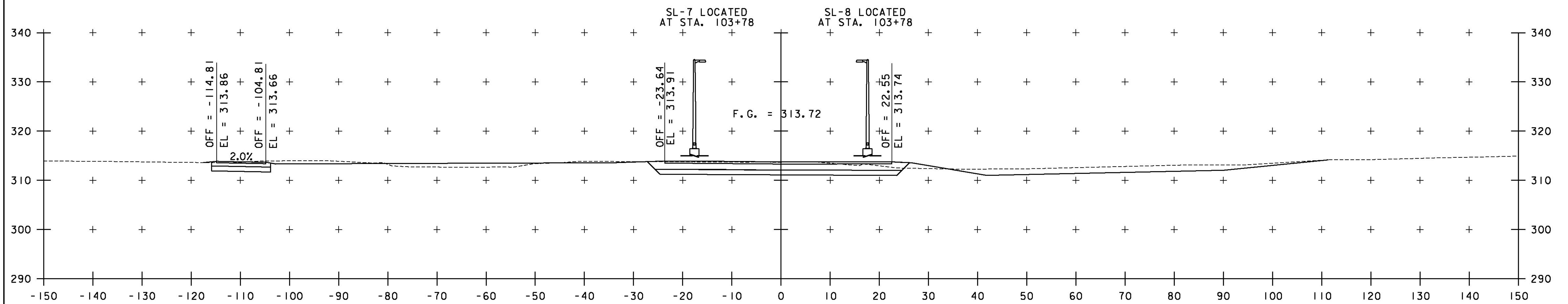
PROJECT NAME: SPRINGFIELD  
 PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09k250xs.dgn  
 PROJECT LEADER: G. SANTY  
 DESIGNED BY: I. MAYNARD  
 CROSS SECTION SHEET 5

PLOT DATE: 6/25/2014  
 DRAWN BY: I. MAYNARD  
 CHECKED BY: M. FOISY  
 SHEET 35 OF 43



104+10.86  
LIMIT OF PARK-AND-RIDE



104+00 = 204+85.75 , 109.81 RT.

PARK-AND-RIDE BASELINE  
STA. 104+00 TO STA. 104+00

PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)

FILE NAME: z09k250xs.dgn  
PROJECT LEADER: G. SANTY  
DESIGNED BY: I. MAYNARD  
CROSS SECTION SHEET 6

PLOT DATE: 6/25/2014  
DRAWN BY: I. MAYNARD  
CHECKED BY: M. FOISY  
SHEET 36 OF 43



## EPSC PLAN NARRATIVE

### 1.1 PROJECT DESCRIPTION

THIS PROJECT IS LOCATED ON US ROUTE 5 IN THE TOWN OF SPRINGFIELD, AT THE INTERSECTION OF US ROUTE 5 AND VT ROUTE 11. WORK TO BE PERFORMED ON THIS PROJECT INCLUDES THE RECONSTRUCTION OF THE EXISTING PARK AND RIDE FACILITY INTO A NEW PARK-AND-RIDE LOT, RELOCATION OF EXISTING SHARED USE PATH, SUBBASE, PAVEMENT, PAVEMENT MARKINGS, LIGHTING, LANDSCAPING, BUS SHELTER AND MISCELLANEOUS APPURTENANCES.

NOTE: AREA OF DISTURBANCE SHALL INCLUDE LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, INCLUDING ANY WASTE, STAGING AND BORROW AREAS WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS.

TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 2.36 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

### 1.2 SITE INVENTORY

#### 1.2.1 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

US ROUTE 5 BORDERS THE PROJECT TO THE EAST AND RANGES IN GRADE FROM 0.5% TO 2.0%. VT ROUTE 11 BORDERS THE PROJECT TO THE NORTH AND RANGES IN GRADE FROM 0.5% TO 2.0%. IMMEDIATELY TO THE SOUTH OF THE PROJECT IS THE BLACK RIVER. THERE ARE EXISTING AERIAL ELECTRIC AND TELEPHONE LINES ON THE SITE.

#### 1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE SITE SLOPES AWAY FROM US ROUTE 11 AT GRADES RANGING FROM 2-30%. VEGETATION CONSISTS OF GRASS AND SCRUB BRUSH. THE SITE RECEIVES MINIMAL RUNOFF FROM OFFSITE AREAS. STORM WATER RUNOFF FROM THE PROJECT WILL FLOW IN A SOUTHERLY DIRECTION THROUGH OPEN SWALE, THROUGH A CULVERT AND ACROSS A NATURALLY VEGETATED AREA BEFORE ENTERING THE BLACK RIVER. AN EXISTING CATCH BASIN AT THE NORTH END OF THE SITE DRAINS UNDER ROUTE 5 AND DISCHARGES TO THE BLACK RIVER. THE CATCH BASIN DRAINS MOSTLY OFF-SITE FLOW, BUT MAY RECEIVE RUNOFF FROM THE WORKZONE.

THE BLACK RIVER IS LOCATED ON THE SOUTH END OF THE SITE, FLOWS WEST TO EAST AND SERVES AS A TRIBUTARY TO THE CONNECTICUT RIVER. THE CONNECTICUT RIVER IS LOCATED APPROXIMATELY HALF A MILE SOUTHEAST OF THE SITE.

THERE IS A WETLAND MITIGATION SITE ON THE WEST SIDE OF ROUTE 5 SOUTH OF THE PROJECT ON THE FORMER ROADBED OF ROUTE 5. THIS PROJECT WILL NOT IMPACT THE MITIGATION SITE.

#### 1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS MAINLY OF BRUSH AND GRASS, WITH SOME FORESTED AREAS TO THE SOUTH AND WEST OF THE SITE.

DISTURBED VEGETATION OUTSIDE OF THE PROPOSED PAVED PARKING AND SIDEWALK AREAS WILL BE REESTABLISHED WITH LANDSCAPING AND STANDARD SEED AND MULCH/EROSION MATTING PRACTICES.

#### 1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF WINDSOR, VERMONT. SOILS ON THE PROJECT SITE ARE AS FOLLOWS:

PODUNK FINE SANDY LOAM, "K FACTOR" = 0.24. THE SOIL IS CONSIDERED TO HAVE MODERATE EROSION POTENTIAL.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING: 0.0-0.23 = LOW EROSION POTENTIAL; 0.24-0.36 = MODERATE EROSION POTENTIAL; 0.37 AND HIGHER = HIGH EROSION POTENTIAL.

#### 1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO  
HISTORICAL OR ARCHEOLOGICAL AREAS: NO  
PRIME AGRICULTURAL LAND: NO  
THREATENED AND ENDANGERED SPECIES: NO  
WATER RESOURCE: BLACK RIVER  
WETLANDS: MITIGATION SITE

### 1.3 RISK EVALUATION

THIS PROJECT FALLS UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. ANY MODIFICATIONS TO THE PROJECT THAT INCREASE THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

### 1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

#### 1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES. BECAUSE THIS PROJECT FALLS UNDER THE CGP 3-9020, BARRIER FENCE SHALL BE USED INSTEAD OF PROJECT DEMARCATION FENCE WITHIN 100 FEET OF A WATER RESOURCE (STREAM, BROOK, LAKE, POND, WETLAND, ETC). BARRIER FENCE IS TO BE USED WITHIN 100' OF THE BLACK RIVER.

#### 1.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE. BARRIER FENCE WILL BE CONSTRUCTED TIGHT TO THE SLOPE LIMIT ALONG THE TOP OF THE SLOPE ABOVE THE BLACK RIVER.

#### 1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR'S PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

#### 1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN. STONE AND BLOCK INLET PROTECTION WILL BE INSTALLED ON ALL EXISTING AND PROPOSED DROP INLETS. PIPE INLET PROTECTION WILL BE INSTALLED FOR THE THREE CULVERTS ON THE PROJECT.

#### 1.4.5 DIVERT UPLAND RUNOFF

DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

THE PROJECT IS ADJACENT TO VT ROUTE 11 AND US ROUTE 5, THEREFORE, IT IS NOT ANTICIPATED THAT DIVERSION MEASURES WILL BE NECESSARY.

#### 1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSION POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

STONE CHECK DAMS WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN, AT A MINIMUM.

#### 1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

SPECIFIC PERMANENT CONTROL MEASURES OF THE PROJECT INCLUDE STONE OUTLET PADS FOR PIPE OUTLETS, AND RE-VEGETATION.

#### 1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3. THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

#### 1.4.9 WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

IT IS ANTICIPATED THAT THIS PROJECT WILL EXTEND INTO THE WINTER CONSTRUCTION SEASON.

#### 1.4.10 STABILIZE SOIL AT FINAL GRADE

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

#### 1.4.11 DE-WATERING ACTIVITIES

DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

DE-WATERING ACTIVITIES ARE NOT ANTICIPATED AS PART OF THIS PROJECT. IN THE EVENT DE-WATERING IS NECESSARY, THE CONTRACTOR SHALL DO SO AT NO ADDITIONAL COST TO THE PROJECT.

#### 1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

### 1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

THE CONSTRUCTION OF THE SHARED USE PATH SHALL OCCUR PRIOR TO THE CONSTRUCTION OF THE PARK-AND-RIDE. SHARED USE PATH TO REMAIN OPEN AT ALL TIMES.

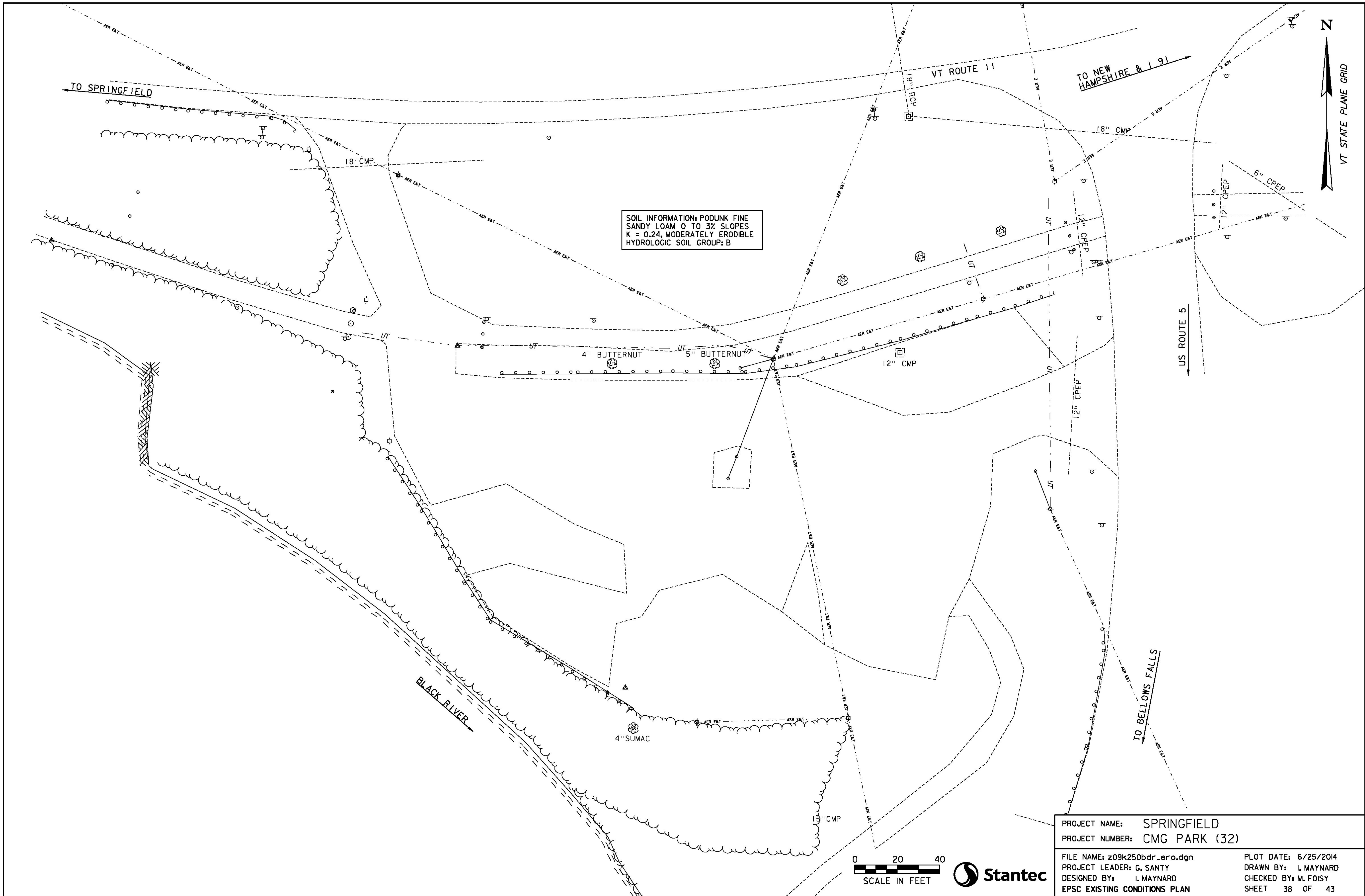
#### 1.5.1 OFF-SITE ACTIVITIES

IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.



PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)

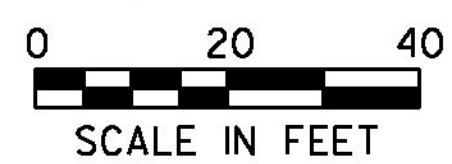
FILE NAME: z09k250frm.dgn PLOT DATE: 6/25/2014  
PROJECT LEADER: G. SANTY DRAWN BY: I. MAYNARD  
DESIGNED BY: I. MAYNARD CHECKED BY: M. FOISY  
EPSC NARRATIVE SHEET 37 OF 43



SOIL INFORMATION: PODUNK FINE SANDY LOAM 0 TO 3% SLOPES  
 K = 0.24, MODERATELY ERODIBLE  
 HYDROLOGIC SOIL GROUP: B



PROJECT NAME:	SPRINGFIELD	PLOT DATE:	6/25/2014
PROJECT NUMBER:	CMG PARK (32)	DRAWN BY:	I. MAYNARD
FILE NAME:	z09k250bdr_ero.dgn	CHECKED BY:	M. FOISY
PROJECT LEADER:	G. SANTY	SHEET	38 OF 43
DESIGNED BY:	I. MAYNARD		
EPSC EXISTING CONDITIONS PLAN			



**GEOTEXTILE FOR SILT FENCE**  
 STA. 103+63, 184' RT. - STA. 103+77, 143' RT.  
 STA. 103+81, 145' RT. - STA. 103+88, 103' RT.  
 STA. 202+10, 19' LT. - STA. 202+92, 22' LT.  
 STA. 202+92, 17' LT. - STA. 203+35, 21' LT.  
 STA. 203+34, 15' LT. - STA. 203+76, 19' LT.

**TEMPORARY STONE CHECK DAM, TYPE I**  
 STA. 101+44, LT. - STA. 103+25, RT.  
 STA. 103+70, RT. - STA. 103+97, RT.  
 STA. 204+00, LT. - STA. 204+70, LT.  
 STA. 204+74, RT. - STA. 204+76, RT.

**TEMPORARY EROSION MATTING**  
 STA. 101+25, RT. - STA. 103+45, RT.  
 STA. 103+10, RT. - STA. 104+11, RT.  
 STA. 103+82, LT. - STA. 103+96, LT.  
 STA. 200+30, RT. - STA. 204+55, RT.  
 STA. 204+00, LT. - STA. 204+72, LT.

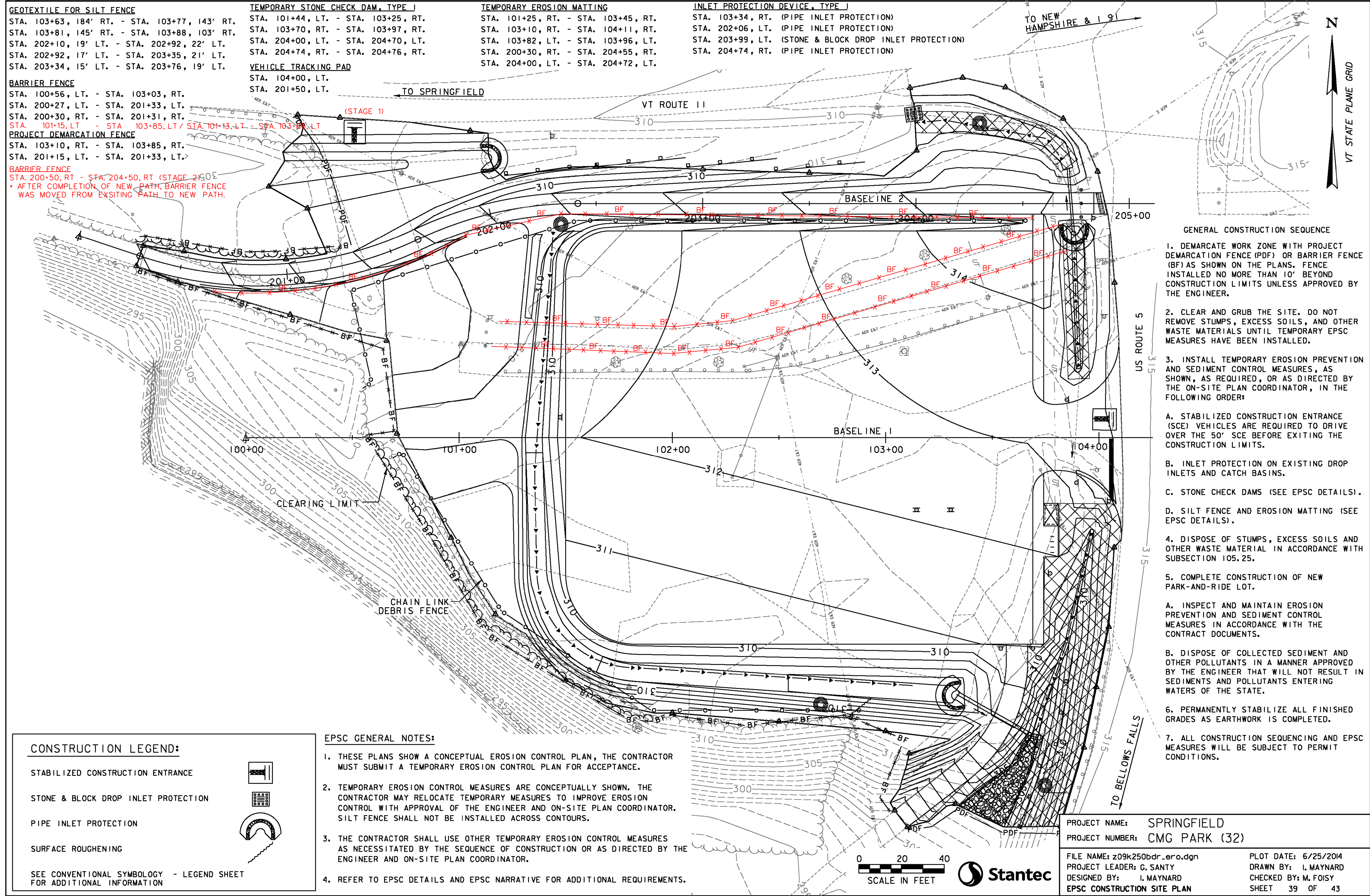
**INLET PROTECTION DEVICE, TYPE I**  
 STA. 103+34, RT. (PIPE INLET PROTECTION)  
 STA. 202+06, LT. (PIPE INLET PROTECTION)  
 STA. 203+99, LT. (STONE & BLOCK DROP INLET PROTECTION)  
 STA. 204+74, RT. (PIPE INLET PROTECTION)

**BARRIER FENCE**  
 STA. 100+56, LT. - STA. 103+03, RT.  
 STA. 200+27, LT. - STA. 201+33, LT.  
 STA. 200+30, RT. - STA. 201+31, RT.  
 STA. 101+15, LT. - STA. 103+85, LT / STA. 101+13, LT. - STA. 103+85, LT

**VEHICLE TRACKING PAD**  
 STA. 104+00, LT.  
 STA. 201+50, LT.

**PROJECT DEMARCATATION FENCE**  
 STA. 103+10, RT. - STA. 103+85, RT.  
 STA. 201+15, LT. - STA. 201+33, LT.

**BARRIER FENCE**  
 STA. 200+50, RT. - STA. 204+50, RT. (STAGE 2)  
 \* AFTER COMPLETION OF NEW PATH, BARRIER FENCE WAS MOVED FROM EXSITING PATH TO NEW PATH.



- GENERAL CONSTRUCTION SEQUENCE**
1. DEMARCATATE WORK ZONE WITH PROJECT DEMARCATATION FENCE (PDF) OR BARRIER FENCE (BF) AS SHOWN ON THE PLANS. FENCE INSTALLED NO MORE THAN 10' BEYOND CONSTRUCTION LIMITS UNLESS APPROVED BY THE ENGINEER.
  2. CLEAR AND GRUB THE SITE. DO NOT REMOVE STUMPS, EXCESS SOILS, AND OTHER WASTE MATERIALS UNTIL TEMPORARY EPSC MEASURES HAVE BEEN INSTALLED.
  3. INSTALL TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES, AS SHOWN, AS REQUIRED, OR AS DIRECTED BY THE ON-SITE PLAN COORDINATOR, IN THE FOLLOWING ORDER:
    - A. STABILIZED CONSTRUCTION ENTRANCE (SCE) VEHICLES ARE REQUIRED TO DRIVE OVER THE 50' SCE BEFORE EXITING THE CONSTRUCTION LIMITS.
    - B. INLET PROTECTION ON EXISTING DROP INLETS AND CATCH BASINS.
    - C. STONE CHECK DAMS (SEE EPSC DETAILS).
    - D. SILT FENCE AND EROSION MATTING (SEE EPSC DETAILS).
  4. DISPOSE OF STUMPS, EXCESS SOILS AND OTHER WASTE MATERIAL IN ACCORDANCE WITH SUBSECTION 105.25.
  5. COMPLETE CONSTRUCTION OF NEW PARK-AND-RIDE LOT.
    - A. INSPECT AND MAINTAIN EROSION PREVENTION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
    - B. DISPOSE OF COLLECTED SEDIMENT AND OTHER POLLUTANTS IN A MANNER APPROVED BY THE ENGINEER THAT WILL NOT RESULT IN SEDIMENTS AND POLLUTANTS ENTERING WATERS OF THE STATE.
  6. PERMANENTLY STABILIZE ALL FINISHED GRADES AS EARTHWORK IS COMPLETED.
  7. ALL CONSTRUCTION SEQUENCING AND EPSC MEASURES WILL BE SUBJECT TO PERMIT CONDITIONS.

**CONSTRUCTION LEGEND:**

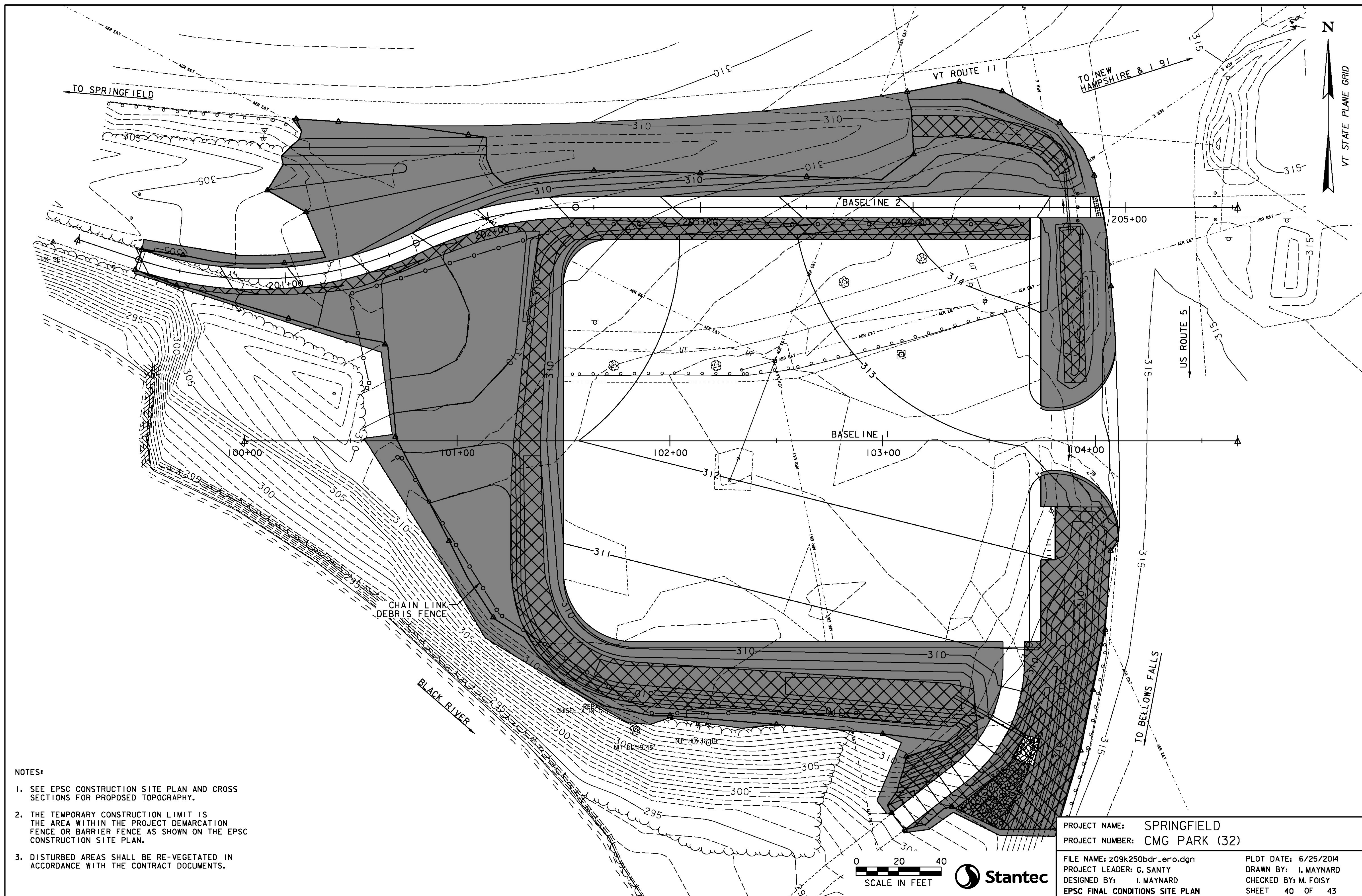
- STABILIZED CONSTRUCTION ENTRANCE
- STONE & BLOCK DROP INLET PROTECTION
- PIPE INLET PROTECTION
- SURFACE ROUGHENING
- SEE CONVENTIONAL SYMBOLOGY - LEGEND SHEET FOR ADDITIONAL INFORMATION

- EPSC GENERAL NOTES:**
1. THESE PLANS SHOW A CONCEPTUAL EROSION CONTROL PLAN, THE CONTRACTOR MUST SUBMIT A TEMPORARY EROSION CONTROL PLAN FOR ACCEPTANCE.
  2. TEMPORARY EROSION CONTROL MEASURES ARE CONCEPTUALLY SHOWN. THE CONTRACTOR MAY RELOCATE TEMPORARY MEASURES TO IMPROVE EROSION CONTROL WITH APPROVAL OF THE ENGINEER AND ON-SITE PLAN COORDINATOR. SILT FENCE SHALL NOT BE INSTALLED ACROSS CONTOURS.
  3. THE CONTRACTOR SHALL USE OTHER TEMPORARY EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION OR AS DIRECTED BY THE ENGINEER AND ON-SITE PLAN COORDINATOR.
  4. REFER TO EPSC DETAILS AND EPSC NARRATIVE FOR ADDITIONAL REQUIREMENTS.

0 20 40  
 SCALE IN FEET

PROJECT NAME: SPRINGFIELD  
 PROJECT NUMBER: CMG PARK (32)  
 FILE NAME: z09k250bdr\_ero.dgn  
 PROJECT LEADER: G. SANTY  
 DESIGNED BY: I. MAYNARD  
 EPSC CONSTRUCTION SITE PLAN

PLOT DATE: 6/25/2014  
 DRAWN BY: I. MAYNARD  
 CHECKED BY: M. FOISY  
 SHEET 39 OF 43



**NOTES:**

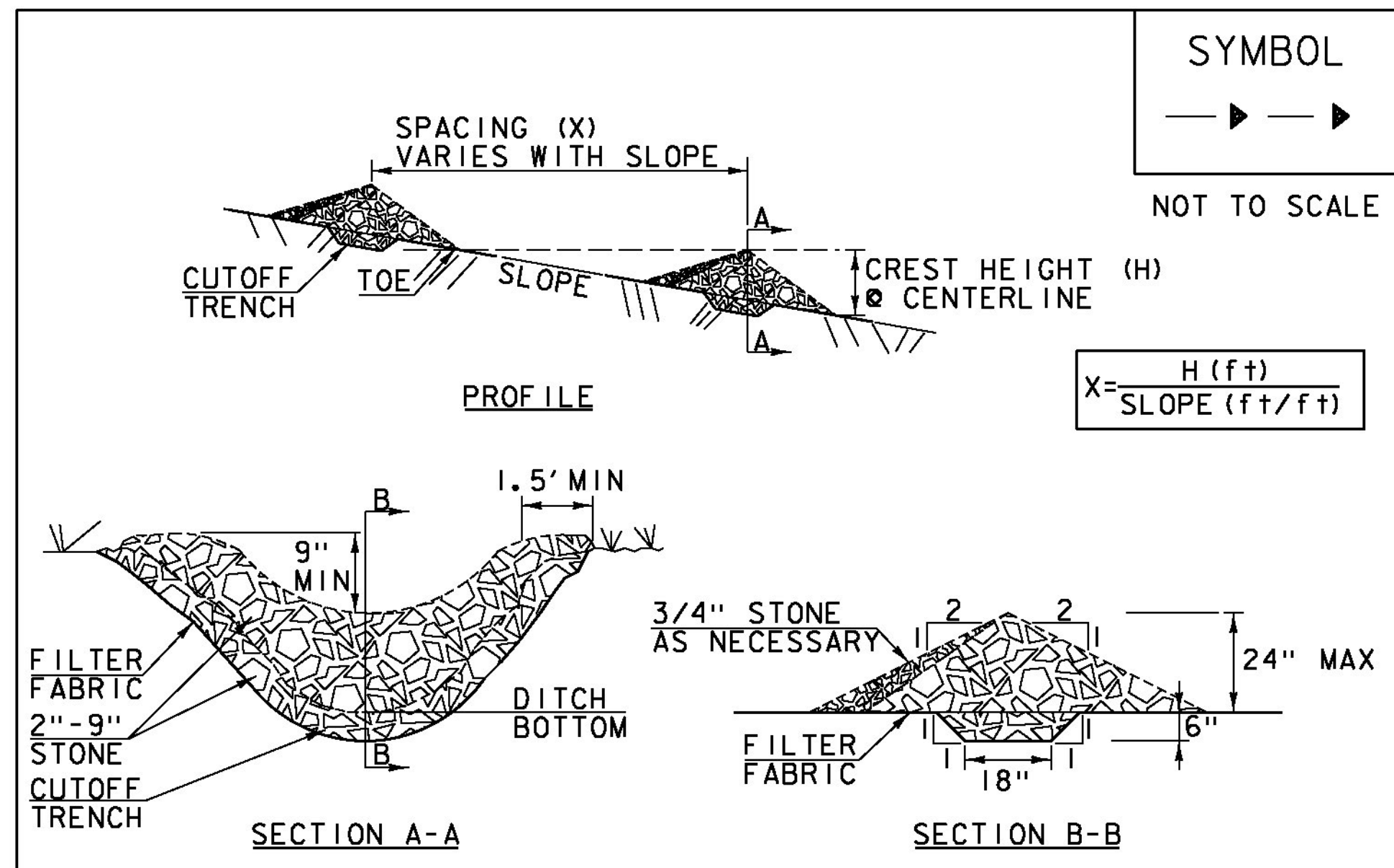
1. SEE EPSC CONSTRUCTION SITE PLAN AND CROSS SECTIONS FOR PROPOSED TOPOGRAPHY.
2. THE TEMPORARY CONSTRUCTION LIMIT IS THE AREA WITHIN THE PROJECT DEMARCATION FENCE OR BARRIER FENCE AS SHOWN ON THE EPSC CONSTRUCTION SITE PLAN.
3. DISTURBED AREAS SHALL BE RE-VEGETATED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

PROJECT NAME: **SPRINGFIELD**  
 PROJECT NUMBER: **CMG PARK (32)**

FILE NAME: z09k250bdr\_ero.dgn  
 PROJECT LEADER: G. SANTY  
 DESIGNED BY: I. MAYNARD  
 EPSC FINAL CONDITIONS SITE PLAN

PLOT DATE: 6/25/2014  
 DRAWN BY: I. MAYNARD  
 CHECKED BY: M. FOISY  
 SHEET 40 OF 43





SYMBOL  
 NOT TO SCALE  
 $X = \frac{H(f+)}{\text{SLOPE}(f+ / f+)}$

**CONSTRUCTION SPECIFICATIONS**

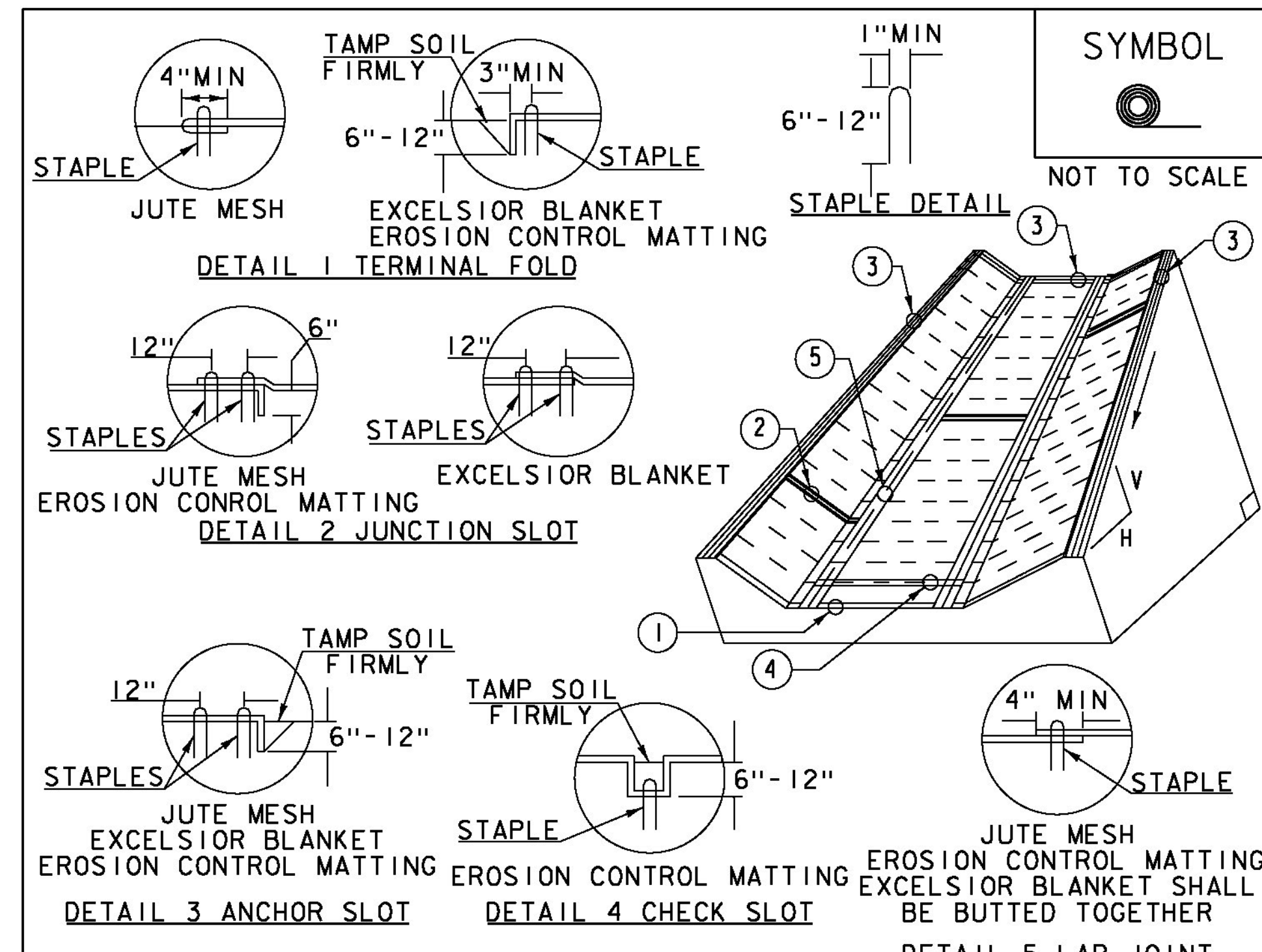
1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. CHECK DAMS SHALL BE SPACED SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. 3/4" FILTERING STONE MAY BE ADDED TO THE FACE OF THE CHECK DAM AS NECESSARY.
4. EXTEND THE STONE A MINIMUM OF 1.5' BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
5. PROTECT CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
6. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
7. MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC  
 ORIGINALLY DEVELOPED BY USDA-NRCS  
 VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**CHECK DAM**

NOTES:  
 REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.  
 THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR TEMPORARY STONE CHECK DAM, TYPE I (PAY ITEM 653.25)

REVISIONS	
MARCH 21, 2008	WHF
JANUARY 8, 2009	WHF



SYMBOL  
 NOT TO SCALE

**CONSTRUCTION SPECIFICATIONS**

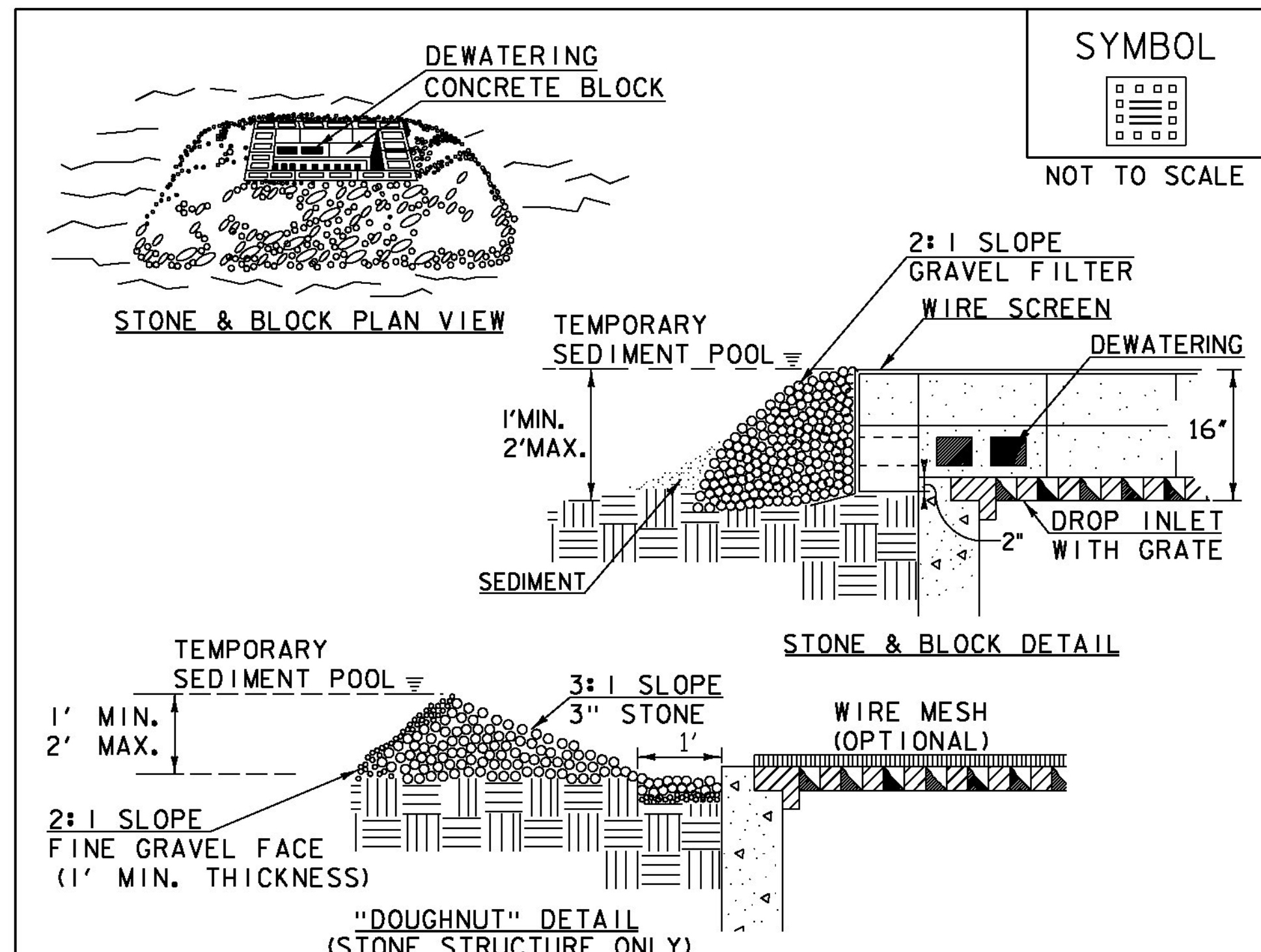
1. EROSION MATTING, CHECK SLOTS, SHALL BE SPACED IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6%. ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4' X 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4' X 150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC  
 ORIGINALLY DEVELOPED BY USDA-NRCS  
 VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**ROLLED EROSION CONTROL PRODUCT (RECP) DITCH**

NOTES:  
 REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.  
 THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20).

REVISIONS	
MARCH 8, 2007	JMF
APRIL 16, 2007	WHF
JANUARY 13, 2009	WHF



SYMBOL  
 NOT TO SCALE

**CONSTRUCTION SPECIFICATIONS**

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2" MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL 1/2" - 3/4" IN DIAMETER PLACED 2" BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1' THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3" STONE AS SHOWN ON THE DRAWINGS.
5. MAXIMUM DRAINAGE AREA 1 ACRE

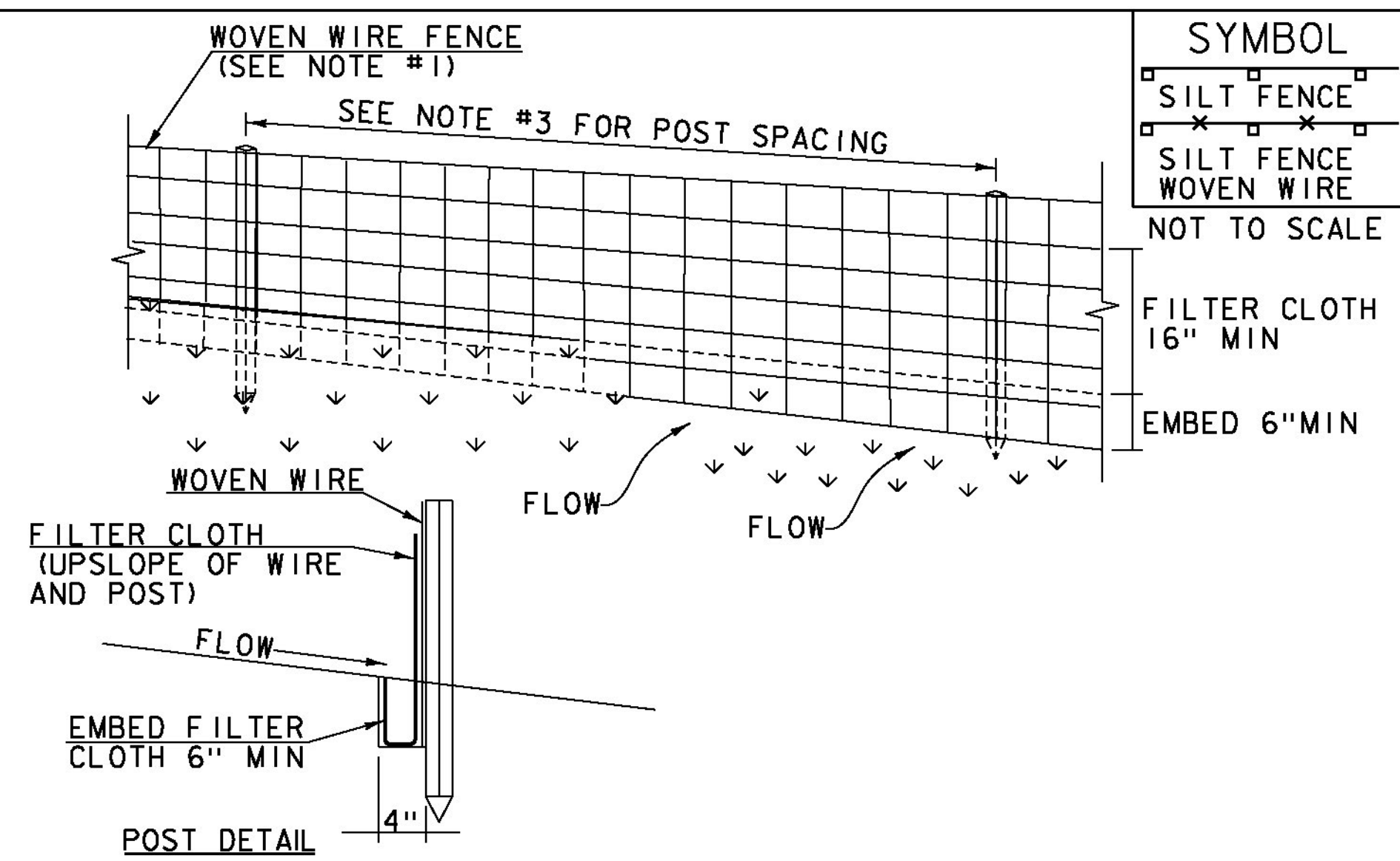
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC  
 ORIGINALLY DEVELOPED BY USDA-NRCS  
 VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**STONE & BLOCK DROP INLET PROTECTION**

NOTES:  
 REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.  
 THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

REVISIONS	
MARCH 6, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: SPRINGFIELD  
 PROJECT NUMBER: CMG PARK (32)  
 FILE NAME: z09k250frm.dgn PLOT DATE: 6/25/2014  
 PROJECT LEADER: VAOT DRAWN BY: VAOT  
 DESIGNED BY: VAOT CHECKED BY: VAOT  
 EPSC DETAILS SHEET I SHEET 41 OF 43



**CONSTRUCTION SPECIFICATIONS**

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAF1100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

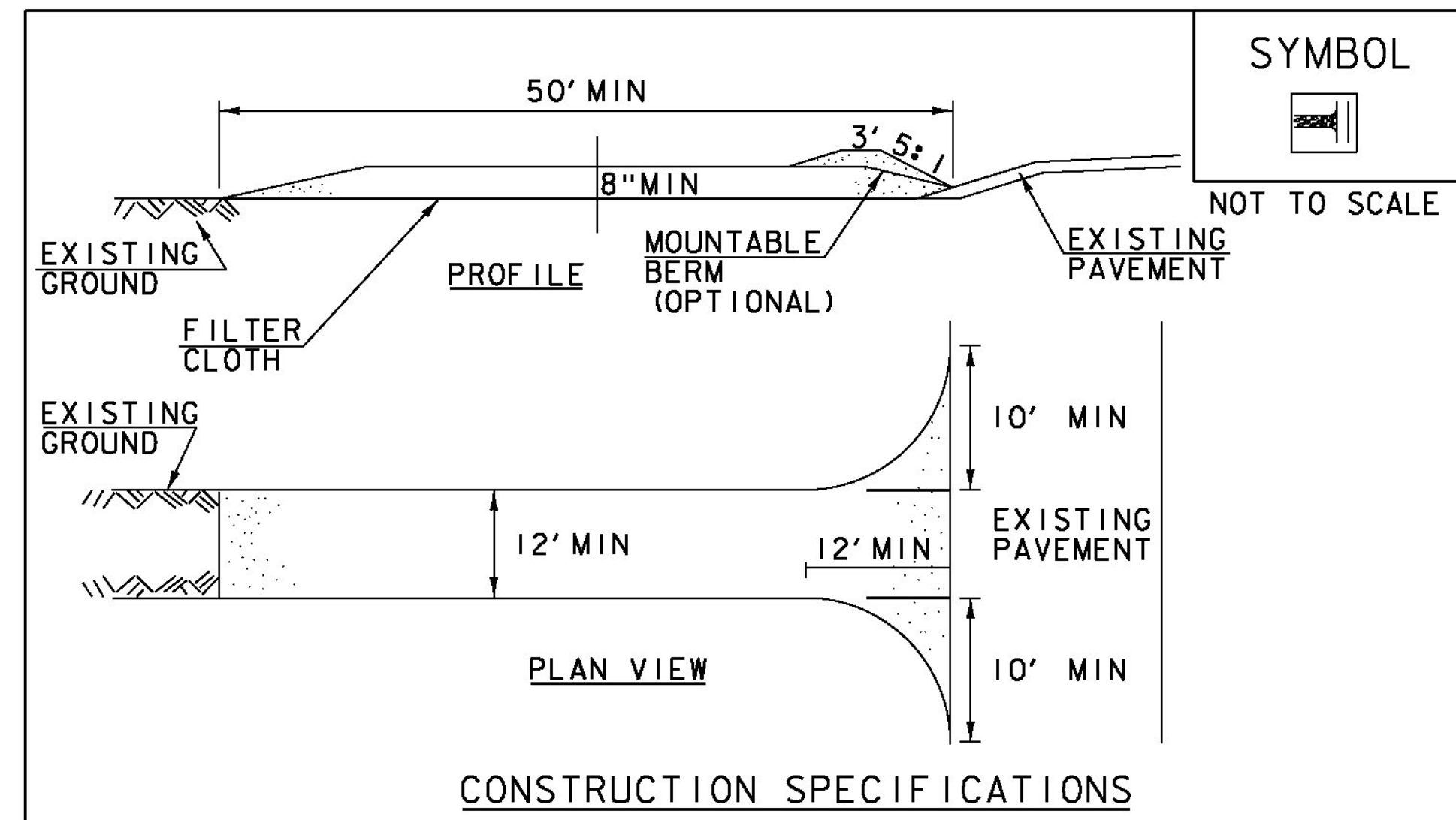
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC  
ORIGINALLY DEVELOPED BY USDA-NRCS  
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**SILT FENCE**

NOTES:  
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.5)

REVISIONS	
MARCH 21, 2008	WHF
DECEMBER 11, 2008	WHF
JANUARY 13, 2009	WHF



**CONSTRUCTION SPECIFICATIONS**

1. STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
3. THICKNESS- NOT LESS THAN 8".
4. WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

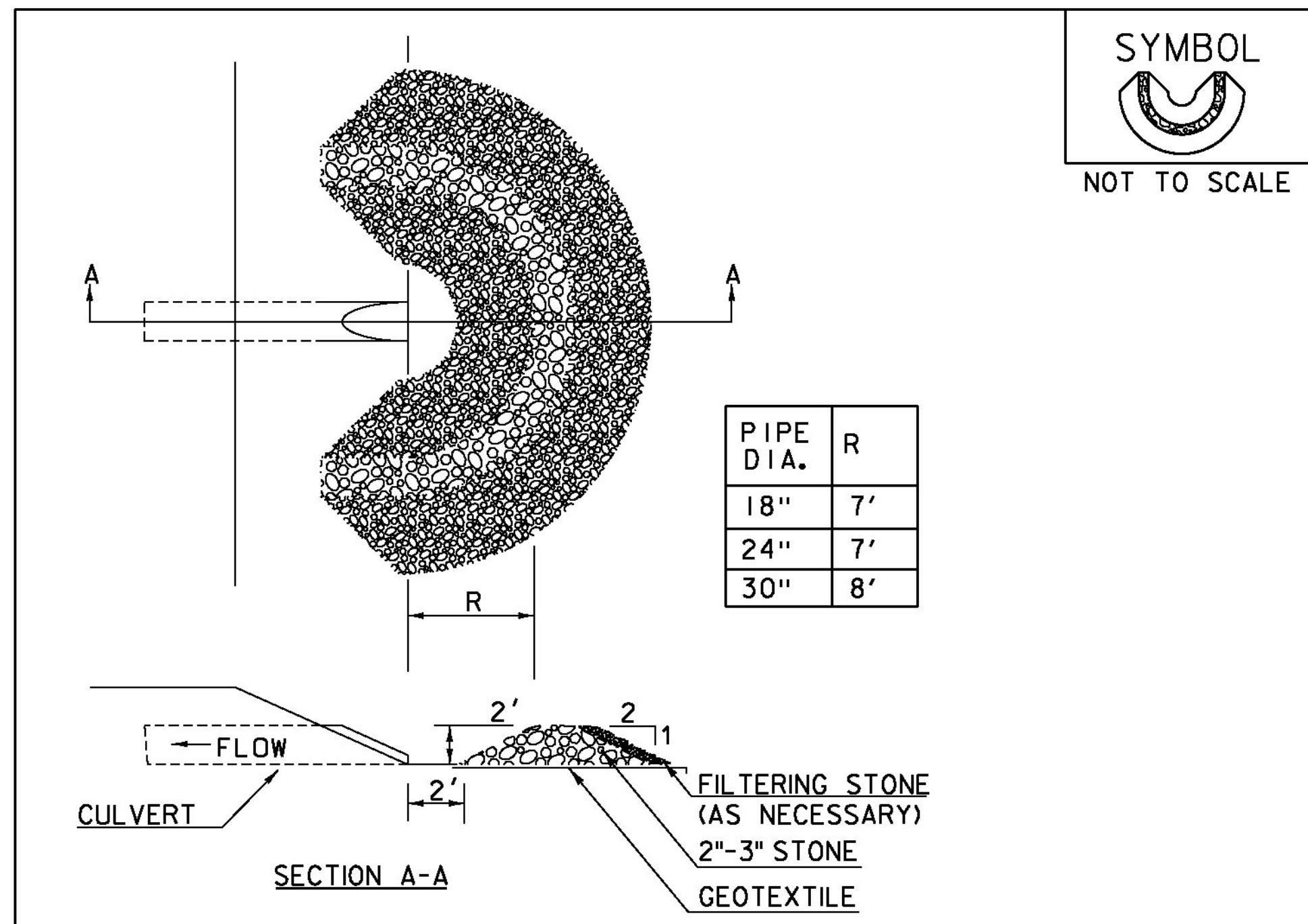
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC  
ORIGINALLY DEVELOPED BY USDA-NRCS  
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**STABILIZED CONSTRUCTION ENTRANCE**

NOTES:  
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF



**CONSTRUCTION SPECIFICATIONS**

1. USE 2" TO 3" STONE. FILTERING STONE SHALL BE 3/4".
2. PLACE STONE OVER GEOTEXTILE.
3. ONCE THE AREAS UPSTREAM FROM THE CHECK DAM ARE STABILIZED WITH VEGETATION, THE SEDIMENT TRAPPED BEHIND THE DAM SHALL BE DISPOSED OF IN AN APPROVED WASTE AREA.
4. THE CHECK DAM(S) SHALL BE FLATTENED AND GRADED IN A MANNER WHICH PROTECTS THE AREA FROM EROSION AND CHANNEL BLOCKAGE. (GEOTEXTILE MUST BE REMOVED).
5. THE GEOTEXTILE MUST BE DISPOSED OF APPROPRIATELY.
6. THE AREA CONTRIBUTING TO THE CHECK DAM SHALL NOT EXCEED 4 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS  
ORIGINALLY DEVELOPED BY USDA-NRCS

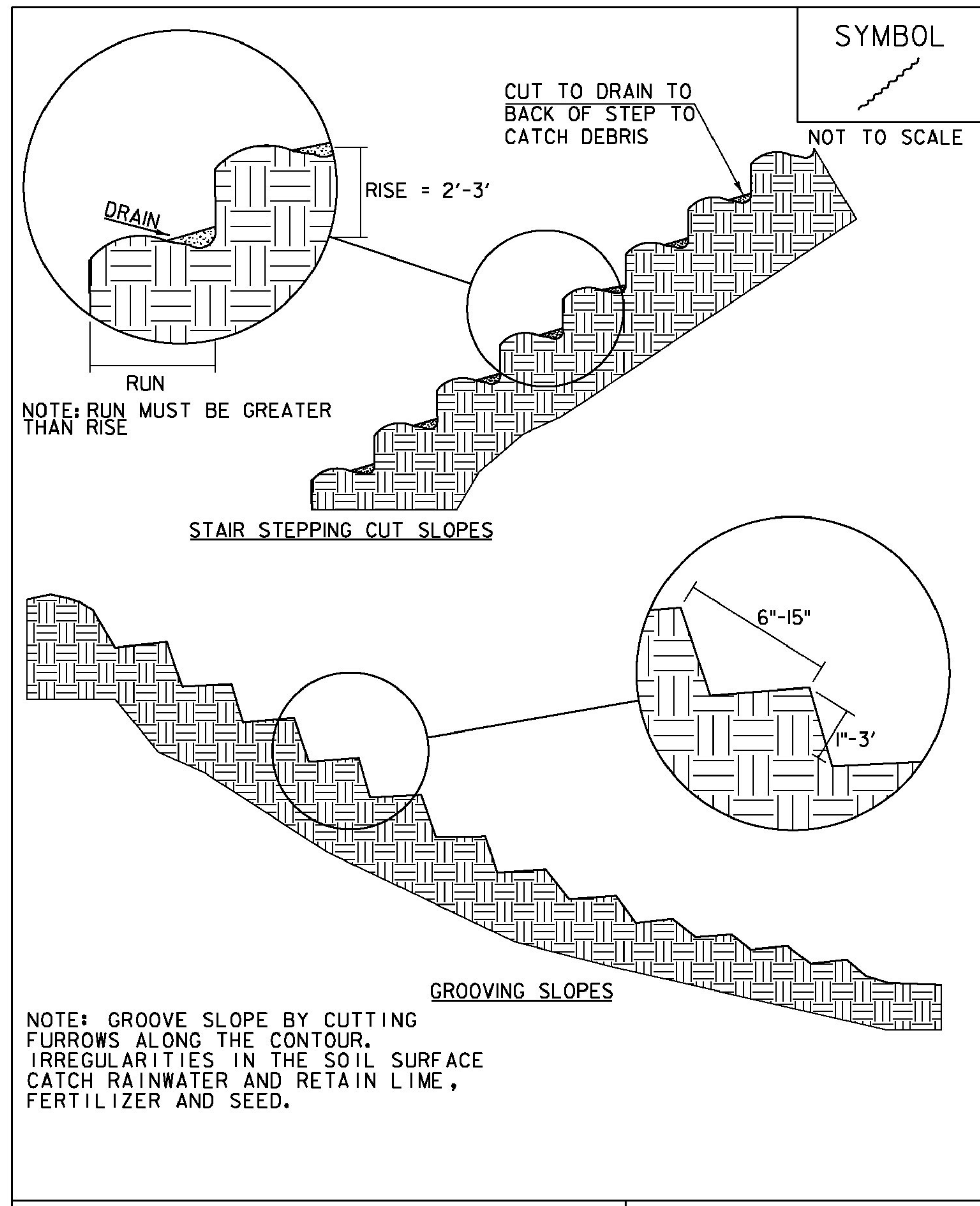
**PIPE INLET PROTECTION**

NOTES:  
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE 1 (PAY ITEM 653.40).

REVISIONS	
MARCH 6, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: SPRINGFIELD	PLOT DATE: 6/25/2014
PROJECT NUMBER: CMG PARK (32)	DRAWN BY: VAOT
FILE NAME: z09K250frm.dgn	CHECKED BY: VAOT
PROJECT LEADER: VAOT	SHEET 42 OF 43
DESIGNED BY: VAOT	
EPSC DETAILS SHEET 2	



ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC  
 ORIGINALLY DEVELOPED BY USDA-NRCS  
 VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**SURFACE ROUGHENING**

NOTES:  
 REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR  
 EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM  
 THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL  
 GUIDANCE.  
 THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE  
 CONTRACT

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: SPRINGFIELD	
PROJECT NUMBER: CMG PARK (32)	
FILE NAME: z09K250frm.dgn	PLOT DATE: 6/25/2014
PROJECT LEADER: VAOT	DRAWN BY: VAOT
DESIGNED BY: VAOT	CHECKED BY: VAOT
EPSC DETAILS SHEET 3	SHEET 43 OF 43



111 North River Road  
 North Aurora, IL 60542  
 Phone: (800) 323-5664  
 Fax: (630) 897-0573  
 sales@belson.com

Model # U190-SF-P

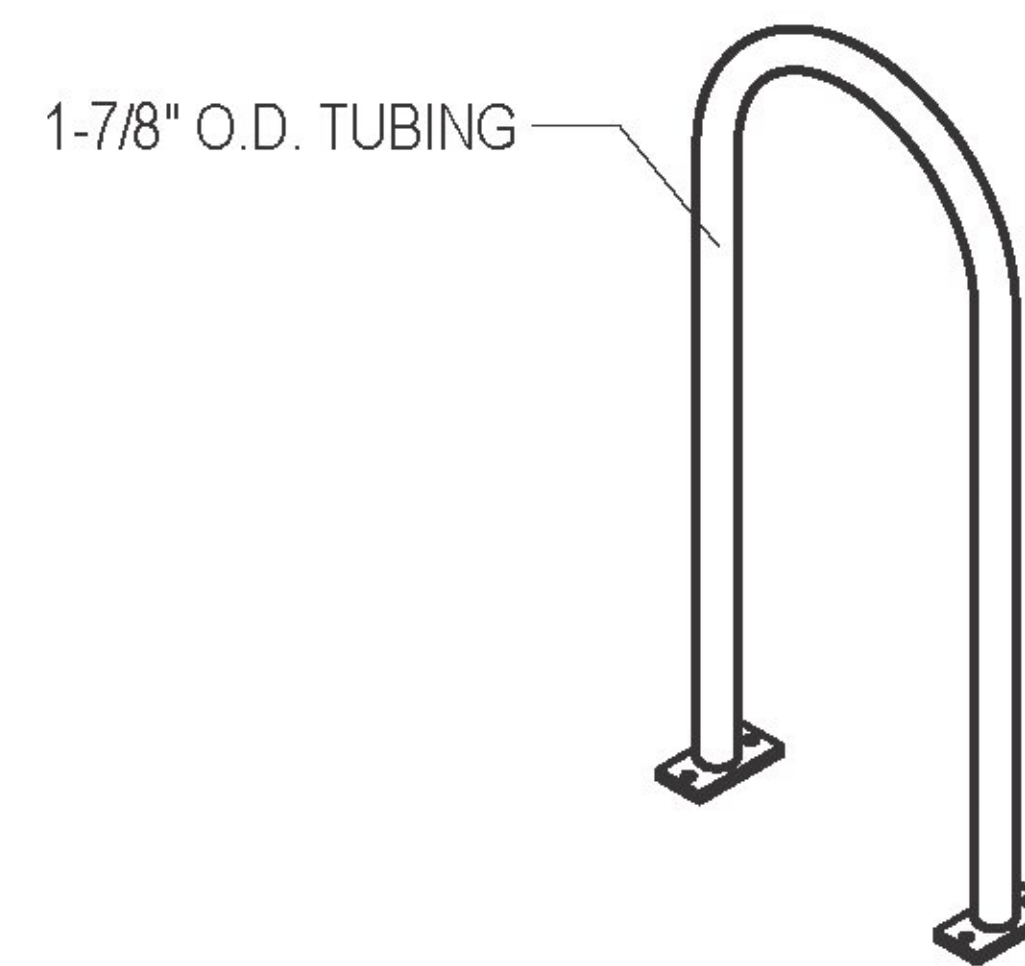
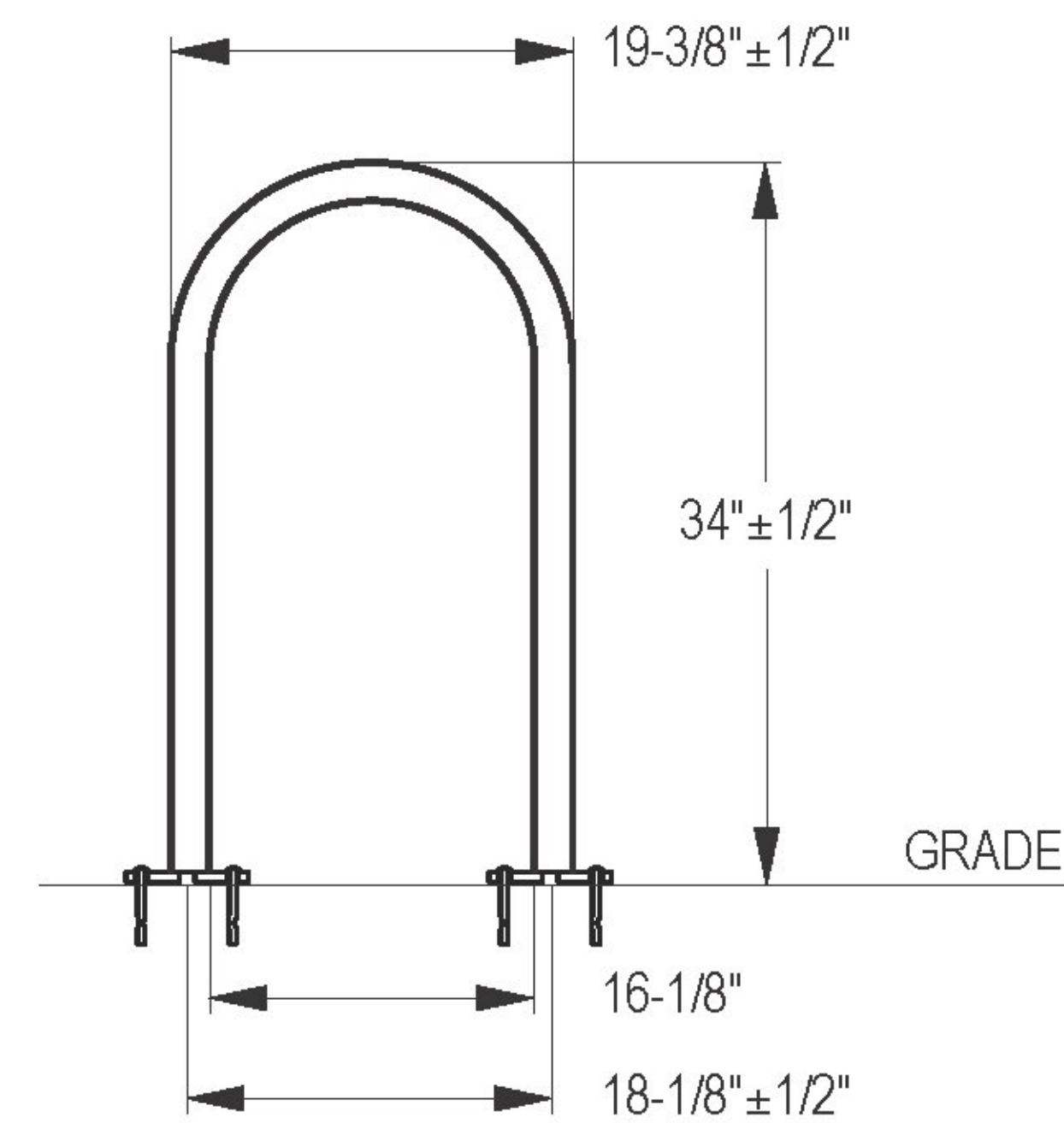
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Quantity: 4

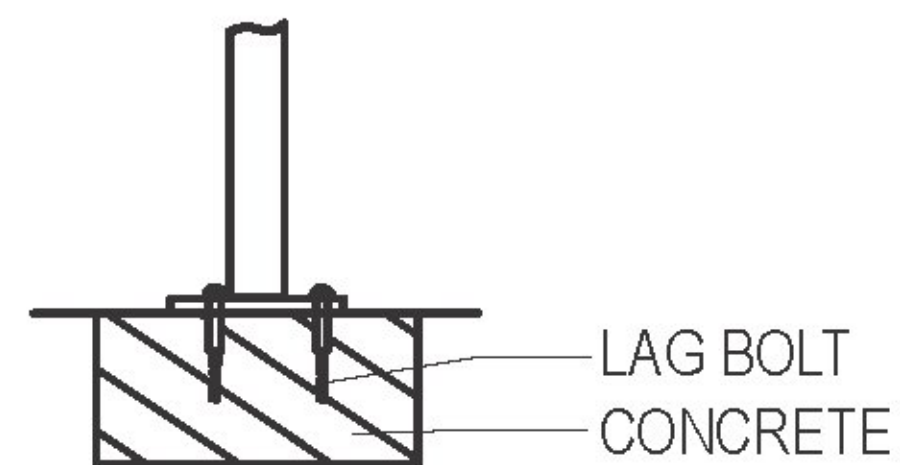
Galvanized & Powder Coated Black

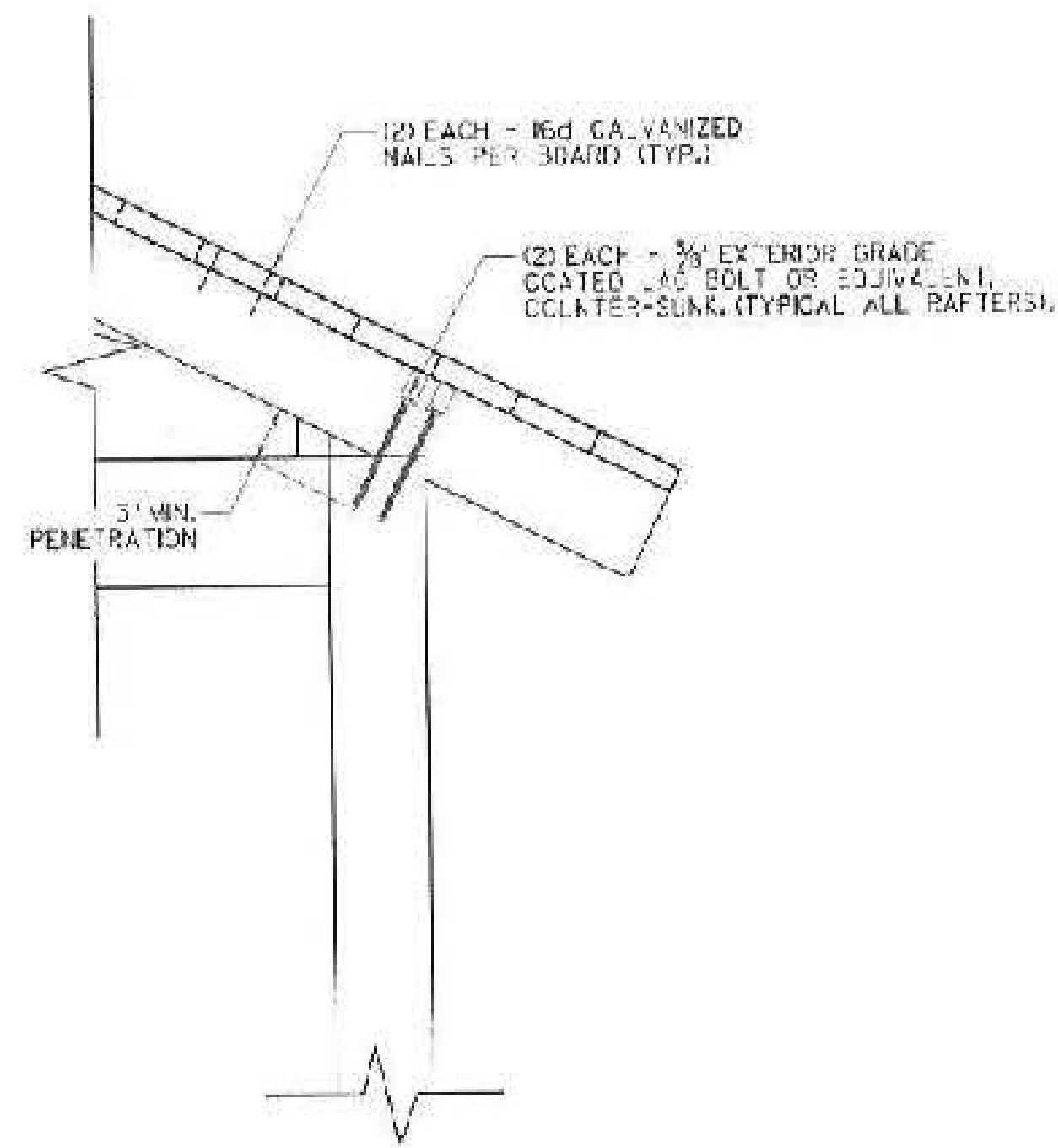
U RACK | 1 LOOP 3 BIKES

ELEVATION VIEW

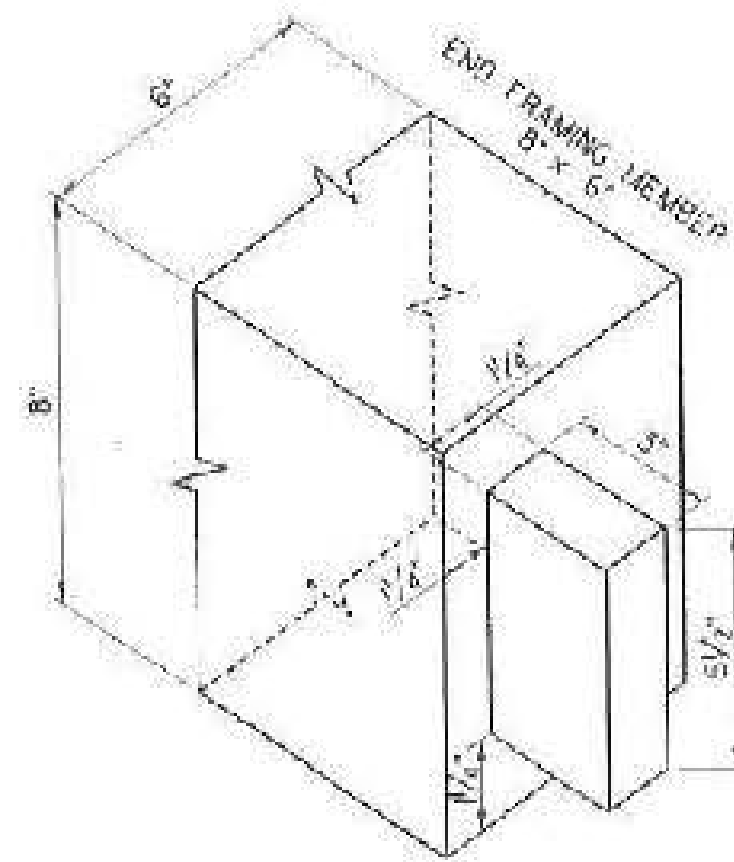


APPROVED: Approval of drawings and/or procedures indicates concurrence with the information presented and does not relieve the Contractor or Fabricator of compliance with all specifications and code requirements	X	
APPROVED AS NOTED		
REVISE AND RESUBMIT		
NOT REVIEWED		
Date: 5-1-2015		
Signature: <i>Marc Fussy</i>		
<small>This review by Stantec Consulting Services Inc. is for the sole purpose of ascertaining conformance with the general design concept. This review shall not mean that Stantec Consulting Services Inc approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor. Submitting same, and such review shall not relieve the Contractor of his responsibility for errors or omissions in the shop drawing or of his responsibility for meeting all requirements of the Contract Documents. The contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to the fabrication processes or to techniques of construction and installation and for coordination of the work of all subtrades.</small>		

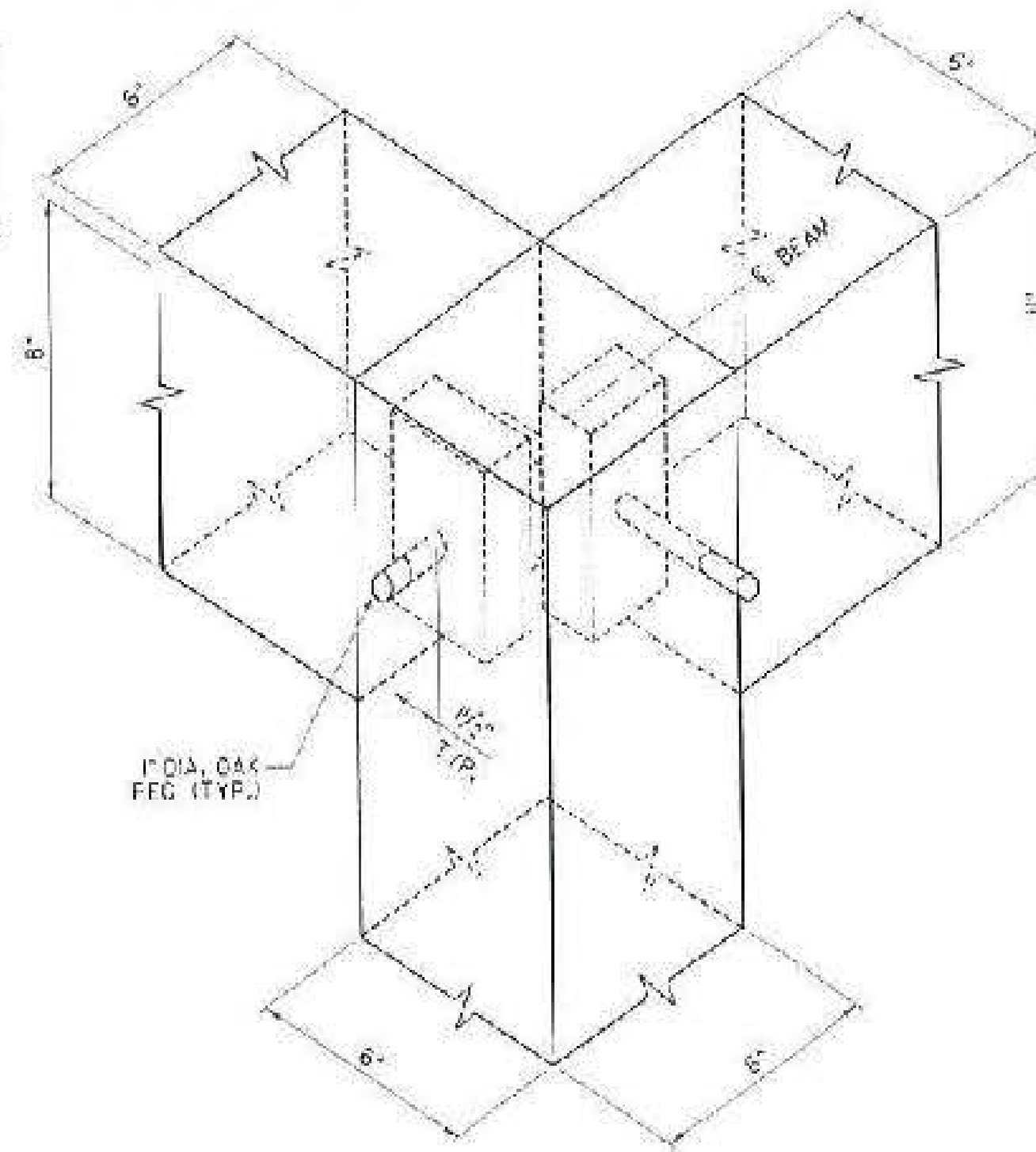




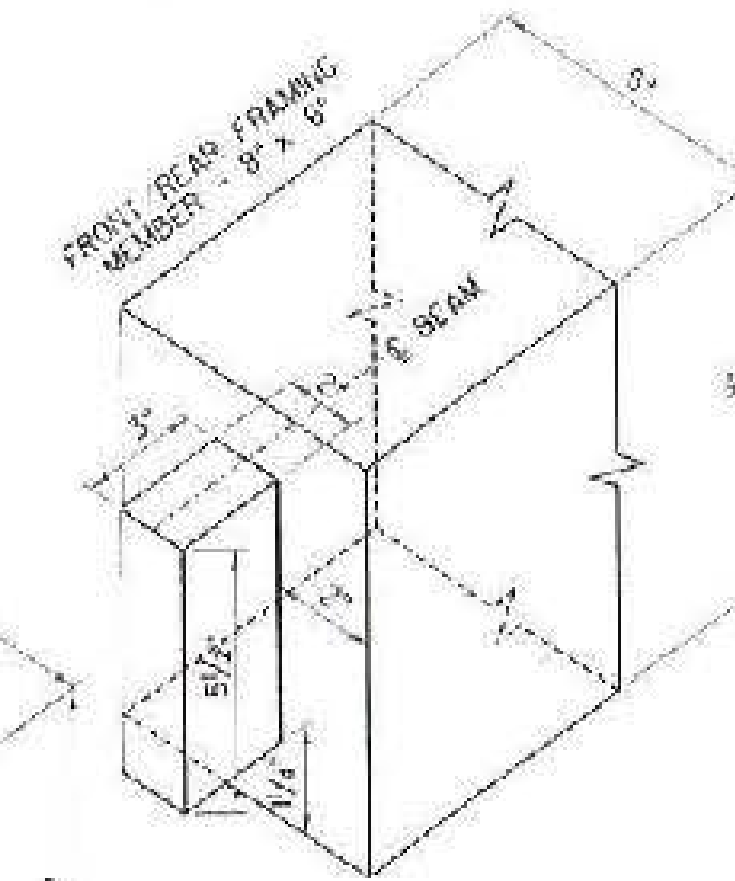
DETAIL "B"  
SCALE 1/4" = 1'-0"



MORTISE & TENON  
DETAIL



DETAIL "C"  
SCALE 1/4" = 1'-0"

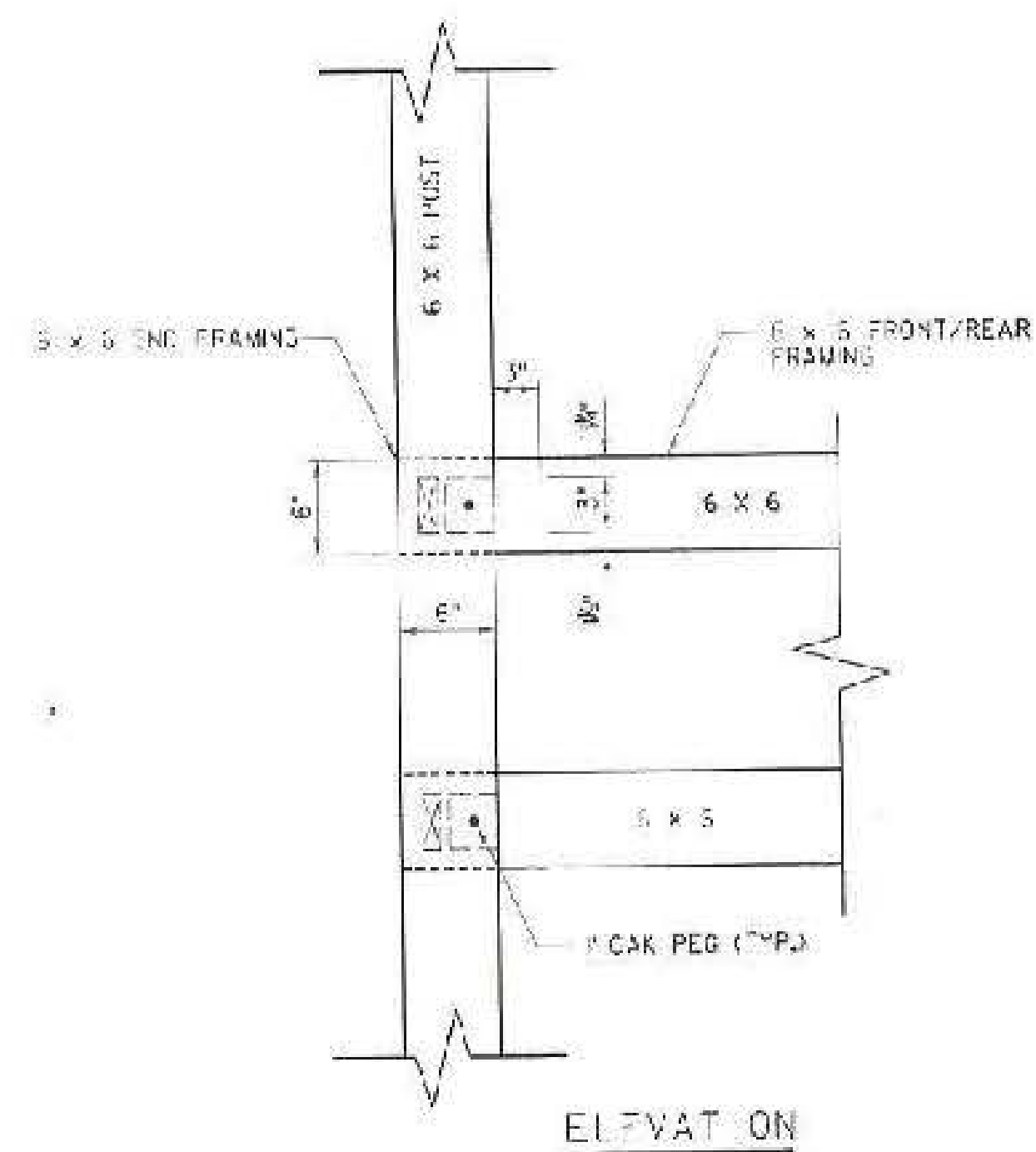
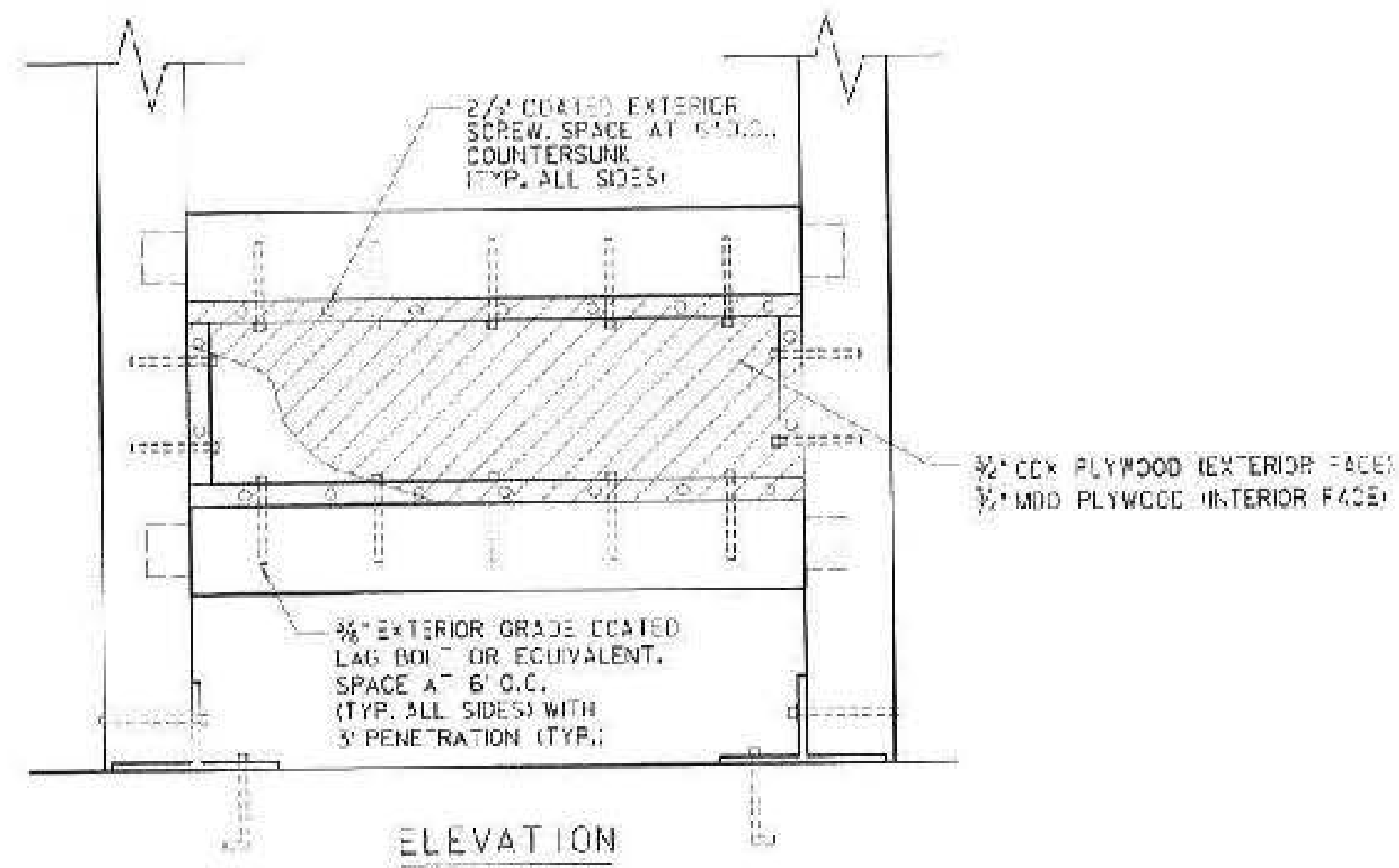
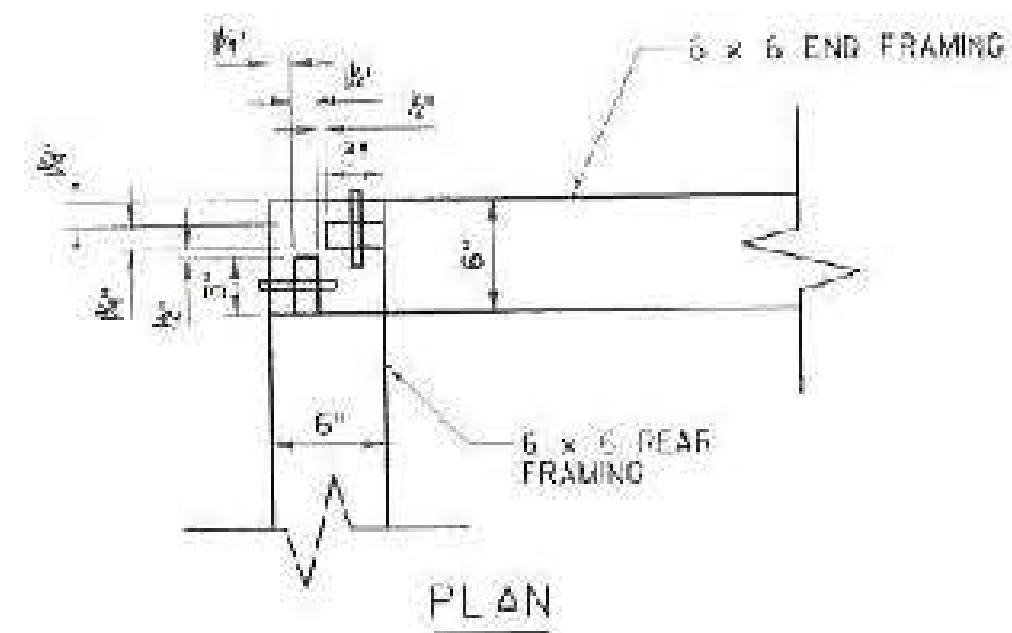


MORTISE & TENON  
DETAIL

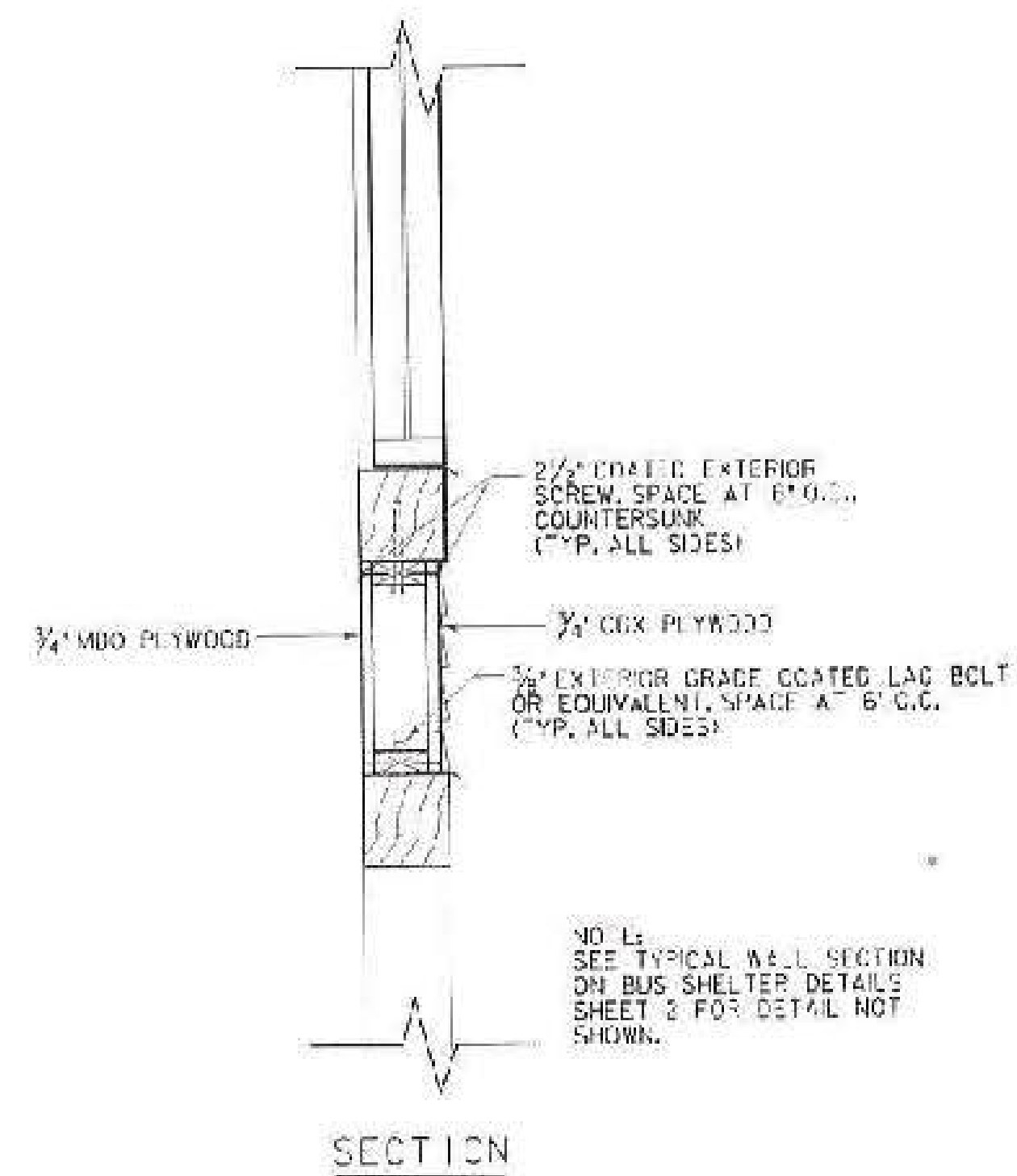
Ingram Construction Corp.  
Approved for Submittal  
Date 4/16/15 By SPC



PROJECT NAME:	SPRINGFIELD	PLT DATE:	6/27/2014
PROJECT NUMBER:	CMC PARK (32)	DRAWN BY:	L. SUTTON
FILE NAME:	208K250.dwg	DESIGNED BY:	J. UNDERWOOD
PROJECT LEADER:	V. FISBY	CHECKED BY:	C. BOHNE
BUS SHEET DETAILS 3		SHEET	21 OF 45



DETAIL "D"  
SCALE 1 1/2" = 1'-0"



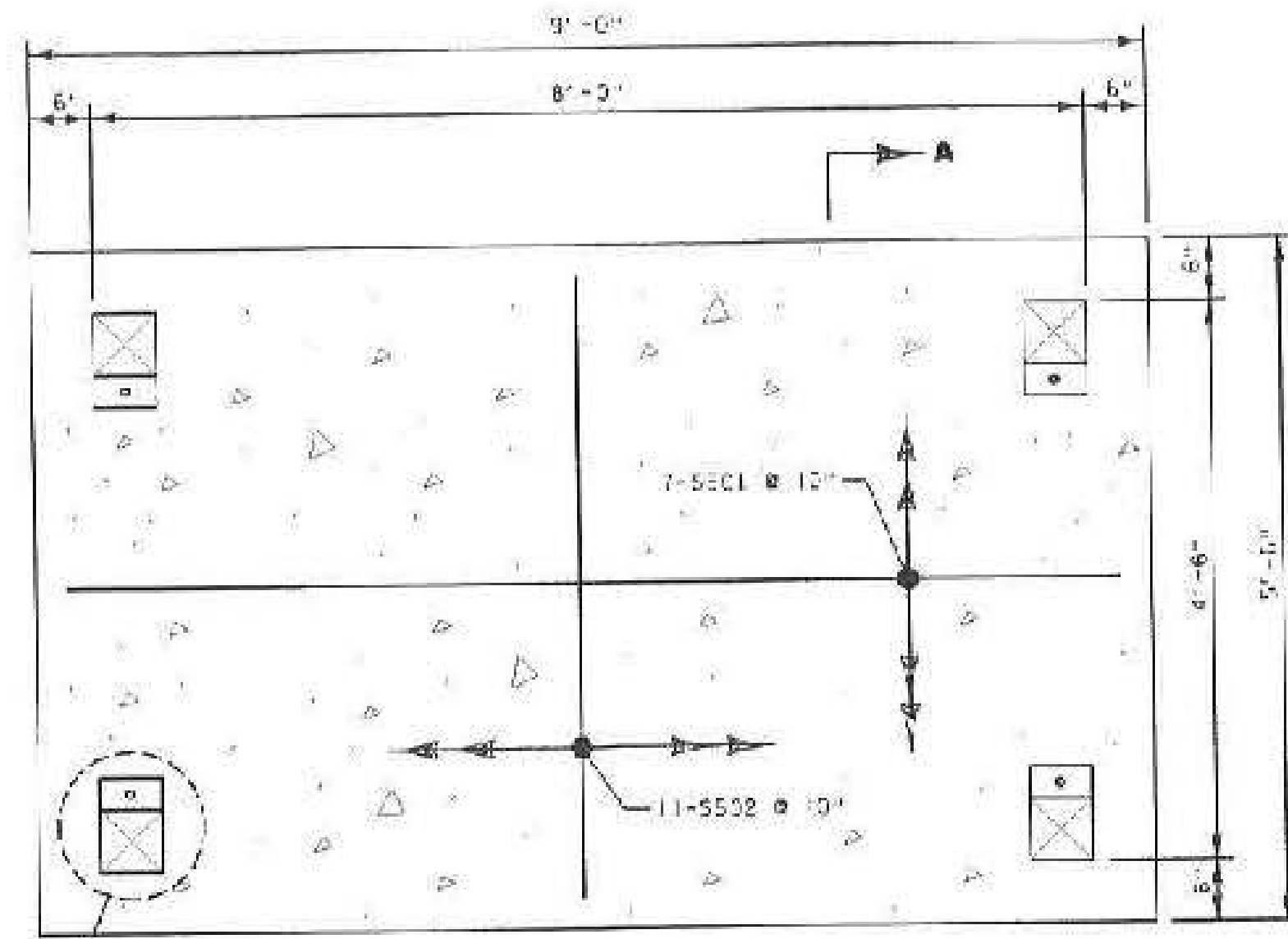
DETAIL "E"  
SCALE 1 1/2" = 1'-0"

Ingram Construction Corp.  
Approved for Submittal  
Date 4/16/15 By SPL

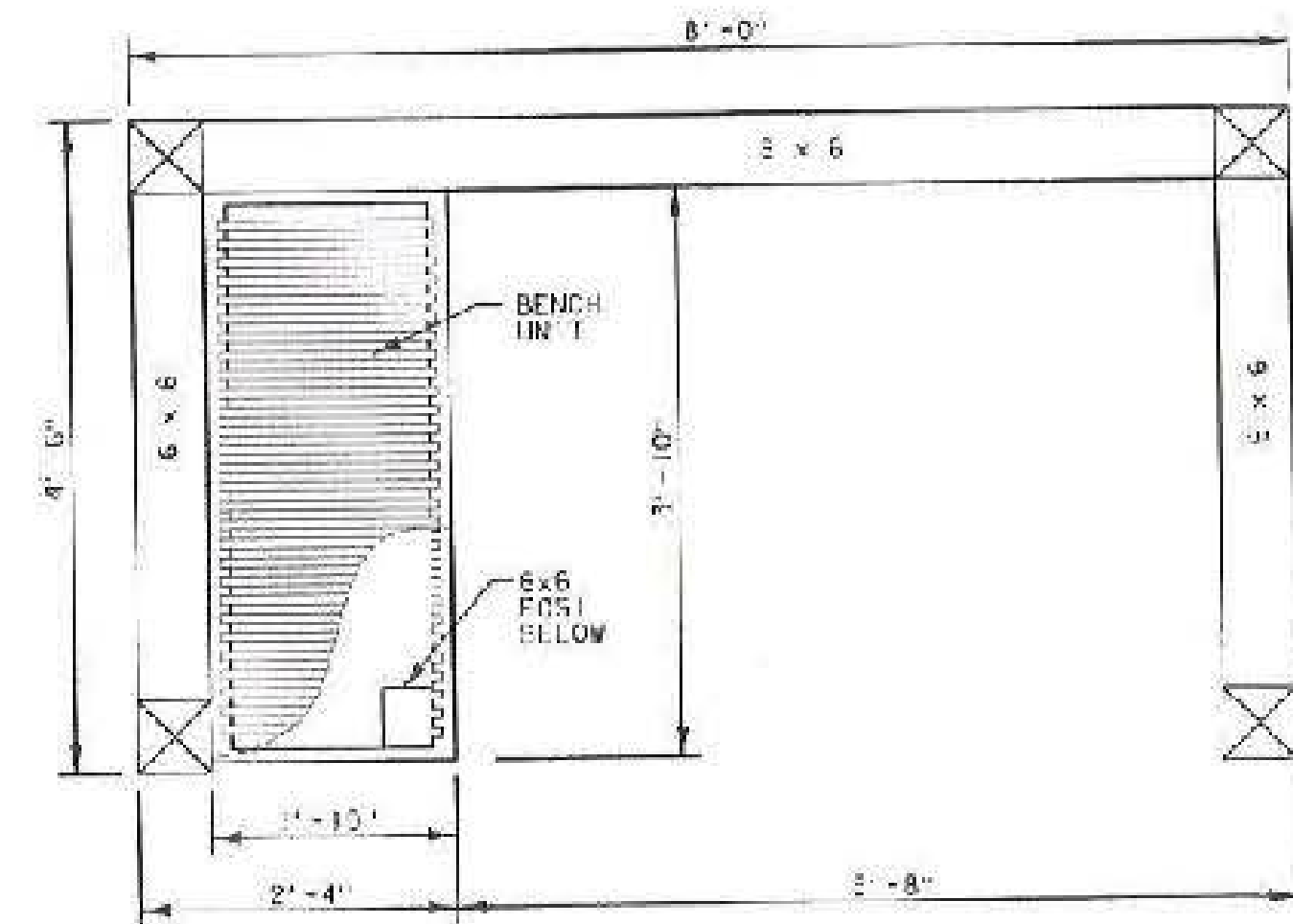
ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED.

PROJECT NAME: SPRINGFIELD	PLAT DATE: 6/25/2014
PROJECT NUMBER: OWS PARK (32)	DRAWN BY: L. BURTON
FILE NAME: 209x250shelter.dwg	CHECKED BY: G. BOOLE
PROJECT LEADER: M. POSEY	SHEET: 25 OF 43
DESIGNED BY: J. HUNTERFORD	
BUS SHELTER DETAILS 4	



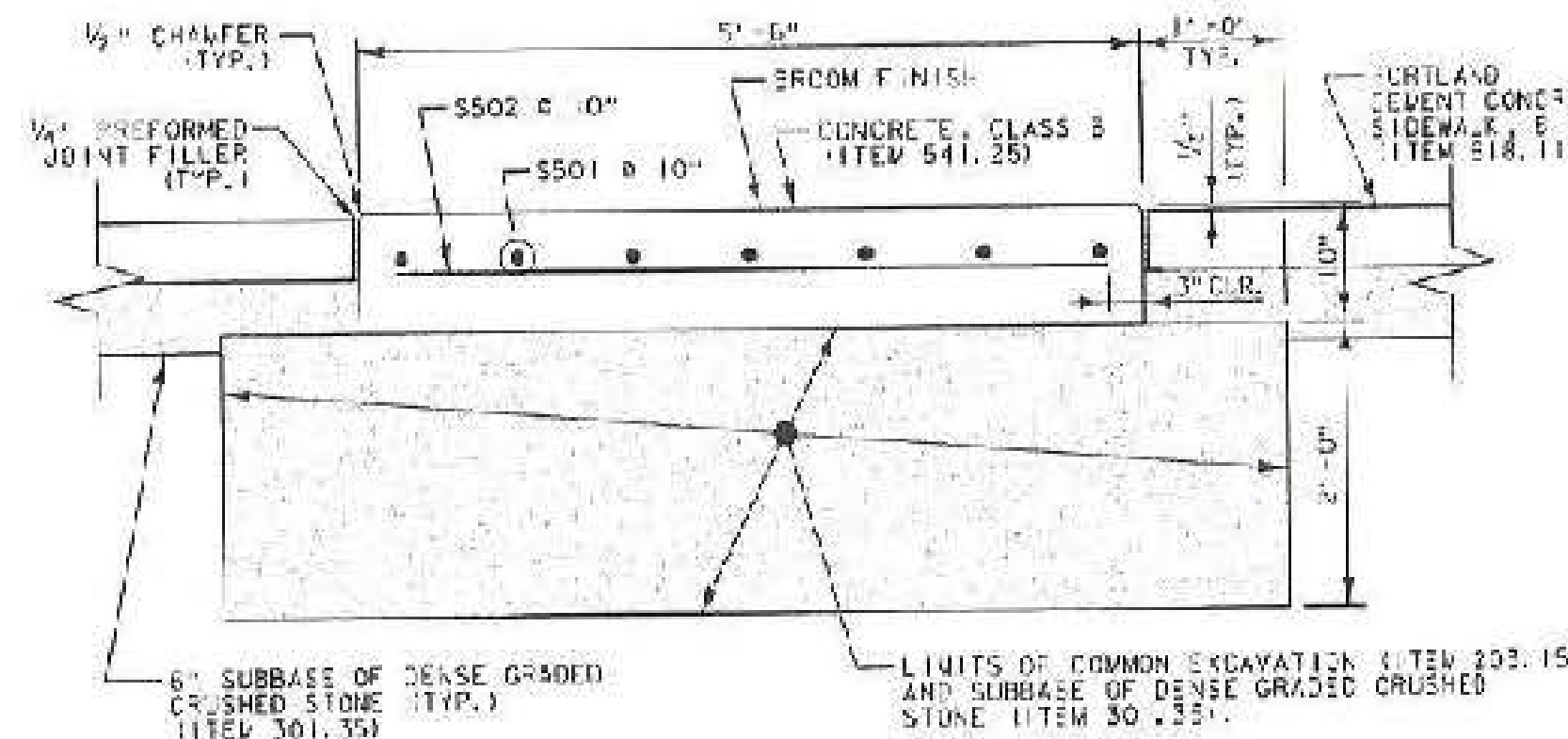


PLAN  
SCALE: 1" = 1'-0"

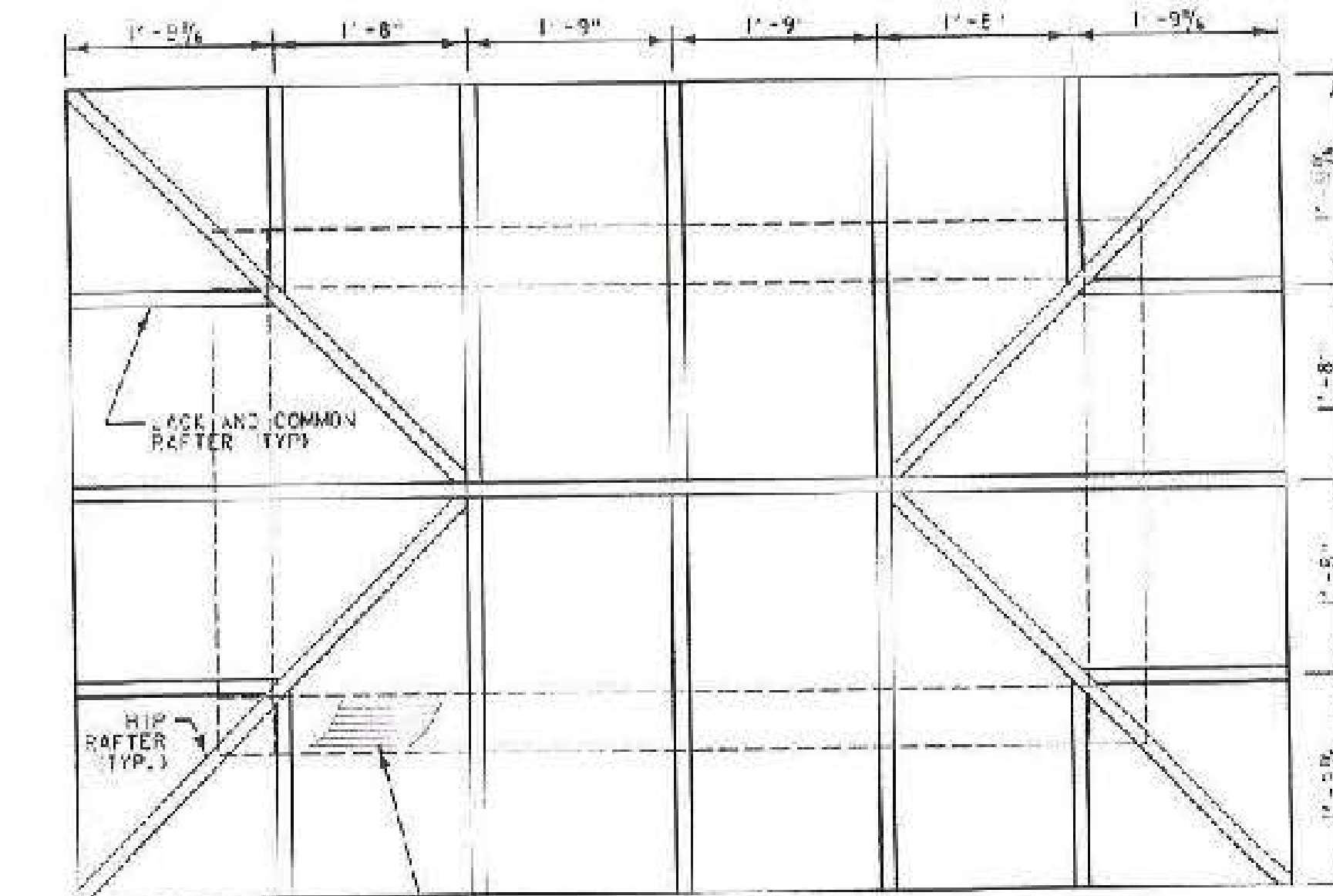


PLAN VIEW  
SCALE: 1" = 1'-0"

REINFORCING SCHEDULE					
NO.	PIECES	SIZE	LENGTH	MARK	TYP.
I	5	#5	8'-6"	S501	STR.
II	5	#5	5'-0"	S502	STR.



SECTION A-A  
SCALE: 1" = 1'-0"  
BUS SHELTER SLAB DETAIL

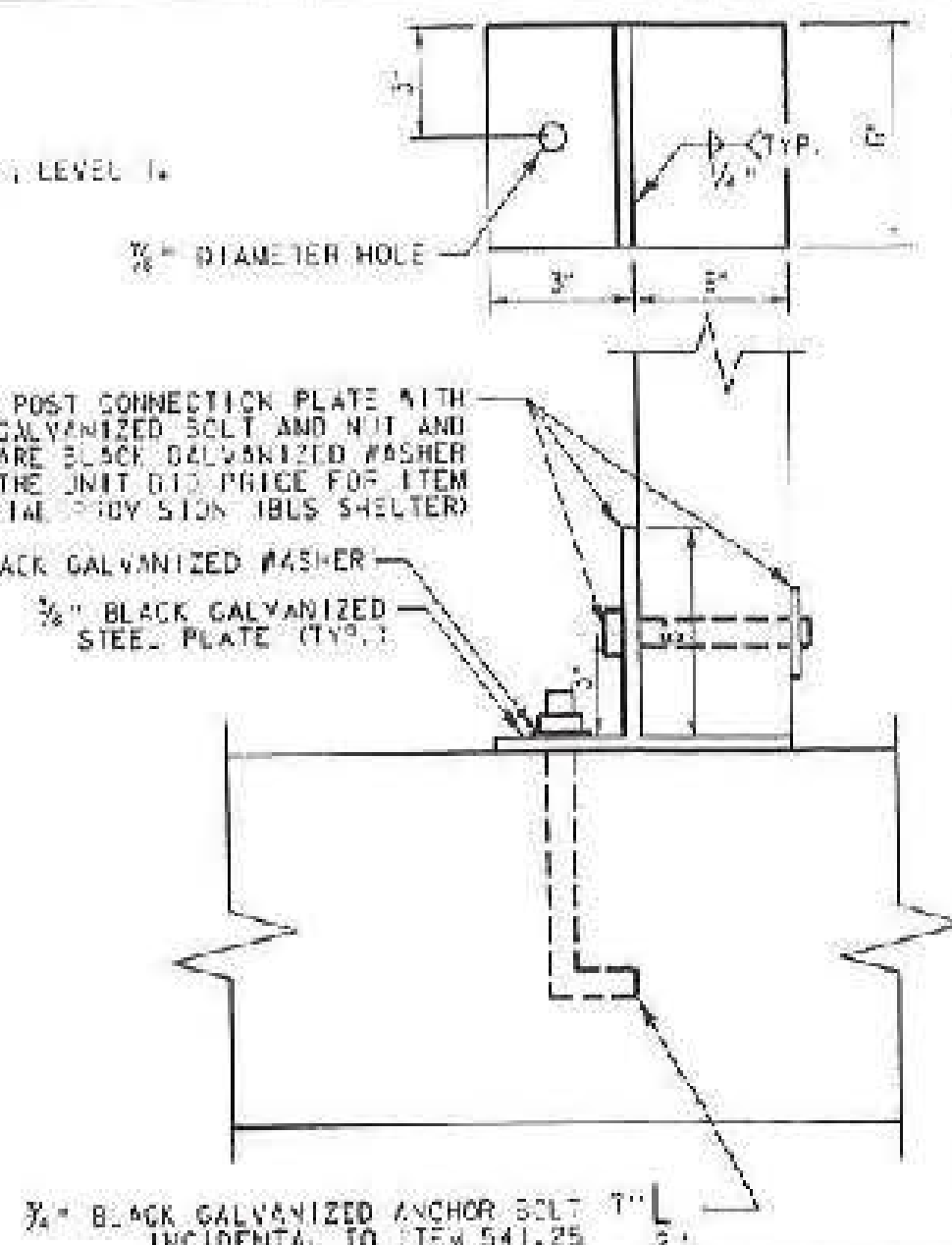


ROOF FRAMING  
SCALE: 1" = 1'-0"

- NOTES:
- JACK AND COMMON RAFTERS ARE 2x6.
  - HIP RAFTERS ARE 2x4.
  - RIDGE BEAM IS 2x8.

NOTES:  
REINFORCING STEEL SHALL BE PAID UNDER ITEM 507.11 REINFORCING STEEL, LEVEL 1.

BLACK GALVANIZED POST CONNECTION PLATE WITH A 3/4" BLACK GALVANIZED BOLT AND NUT AND A 3" SQUARE BLACK GALVANIZED WASHER INCLUDED IN THE UNIT PRICE FOR ITEM 200.643 SPECIAL PROVISION (BUS SHELTER).



NOTE: DRILL AND EPOXY ANCHOR NG WILL BE PERMITTED, MINIMUM 3/4" ANCHOR ROD EMBEDMENT INTO CONCRETE SHALL BE 6" AND HAVE A MINIMUM FULL CUT STRENGTH OF 3,000 LBS.

DETAIL A  
NOT TO SCALE

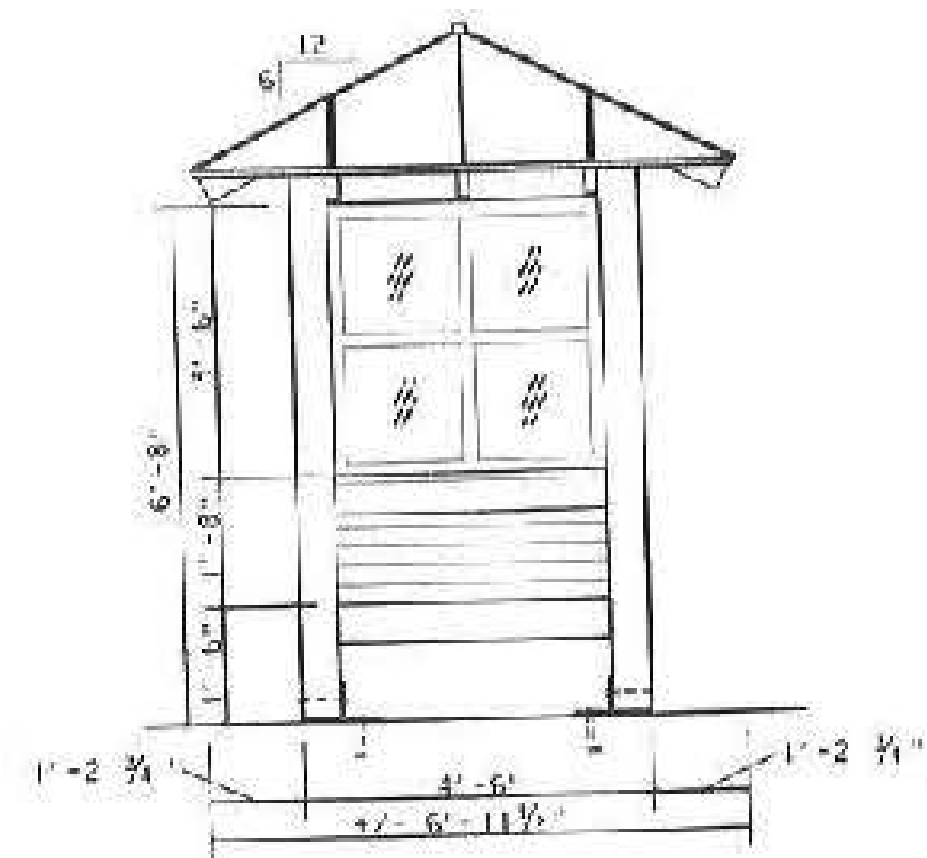
Concrete by others

- NOTES:
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION, 2011 STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, ITS LATEST REVISIONS, AND THE BASTIEN LRPD BRIDGE DESIGN SPECIFICATIONS, DATED 2010, AND ITS LATEST REVISIONS.
  - REINFORCING PLACEMENT TOLERANCES SHALL BE:  
SPACING: 1/2" - 1"  
CLEARANCE: 1/2" - 3/4"
  - ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2" BY 1/2".
  - WATER REPELLENT SILANE (ITEM 514.10) SHALL BE APPLIED TO ALL EXPOSED CONCRETE.
  - ALL MATERIALS AND WORK DETAIL ON THIS SHEET SHALL BE INCLUDED UNDER ITEM 200.643 SPECIAL PROVISION (BUS SHELTER) UNLESS OTHERWISE NOTED.
  - ALL WOODEN PEGS SHALL BE 1" DIAMETER DAK.
  - THE STRUCTURE WAS DESIGNED FOR THE FOLLOWING LOADS:  
DECKING SMD LOAD = 100 psf  
BASIC WIND SPEED = 90 mph  
CATEGORY I
  - ALL DIMENSIONS ARE NOMINAL. MEMBERS SHALL BE SURF-LED ON FOUR SIDES.
  - TIMBER FRAMING SHALL BE APPEARANCE GRADE WHITE OAK (NO. 1).  
ROOF SHEATHING SHALL BE NO. 1 OR NO. 2 SPF.  
BENCH FRAMING SHALL BE APPEARANCE GRADE WHITE OAK (NO. 1).
  - SEE BUS SHELTER SPECIAL PROVISION IN CONTRACT DOCUMENTS FOR ADDITIONAL REQUIREMENTS.

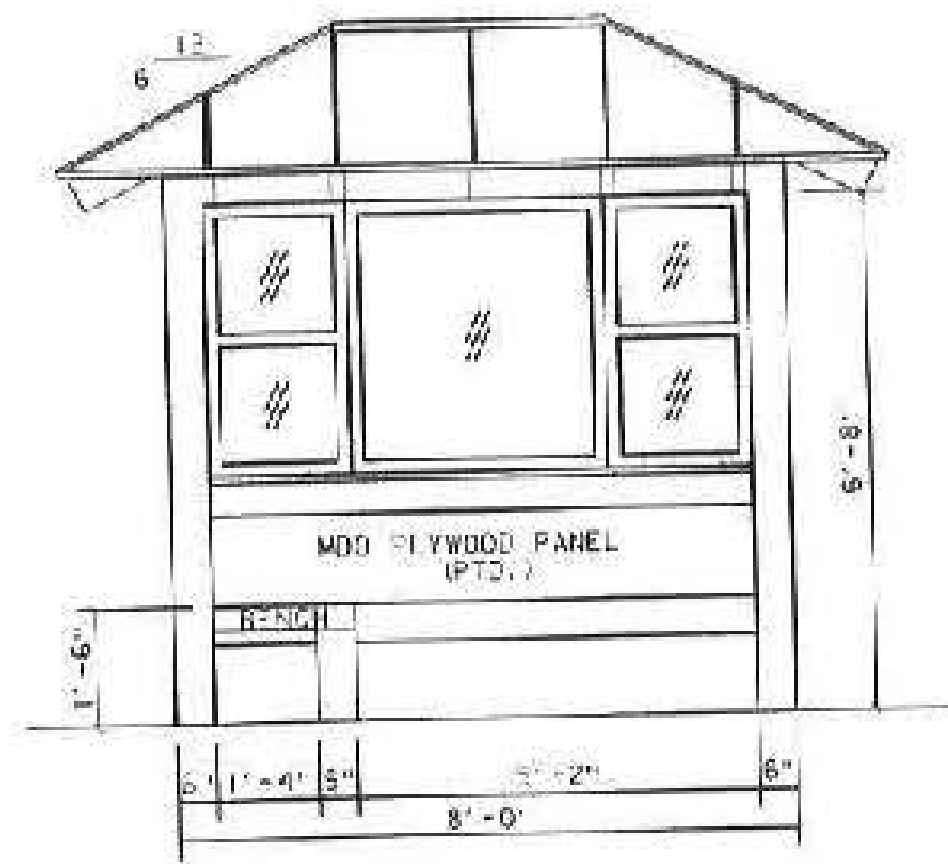
PROJECT NAME: SPRINGFIELD  
PROJECT NUMBER: CMG PARK (32)  
FILE NAME: 208K2506.rvt - 06/15/2011  
PROJECT LEADER: N. FOISY  
DESIGNED BY: J. HUNTERFORD  
BUS SHELTER DETAILS 1  
PLOT DATE: 1/23/2011  
DRAWN BY: L. BUCKTON  
CHECKED BY: G. BOGUE  
SHEET 25 OF 43



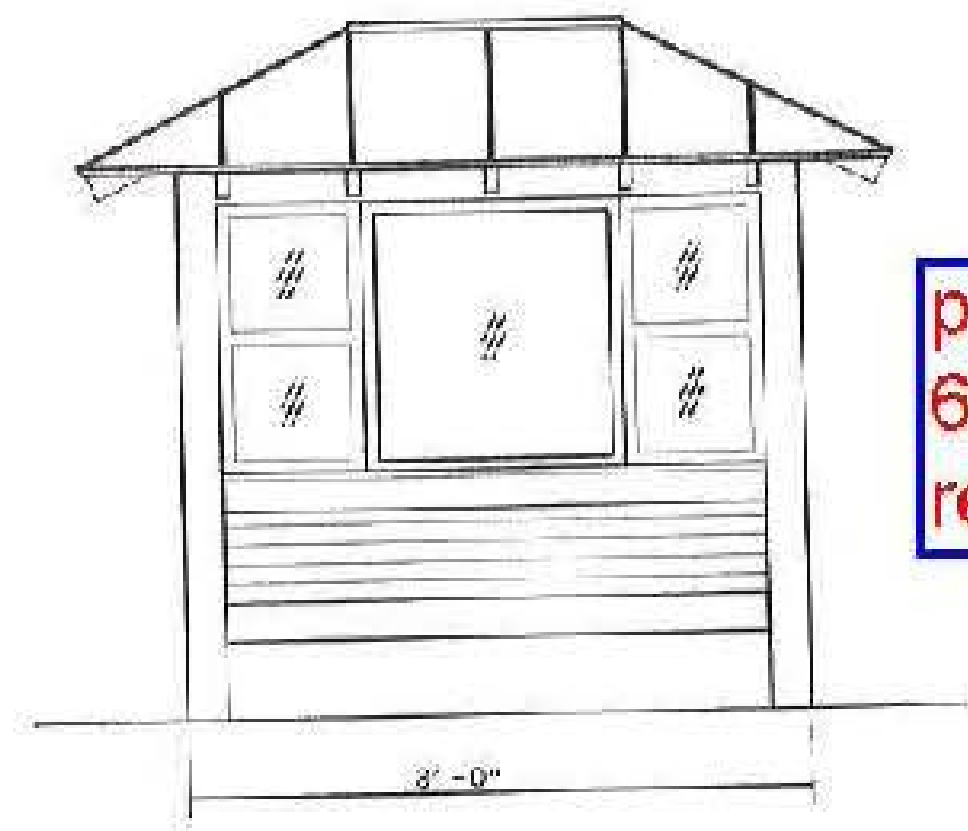
Ingram Construction Corp.  
Approved for Submittal  
Date 4/16/15 By SPC



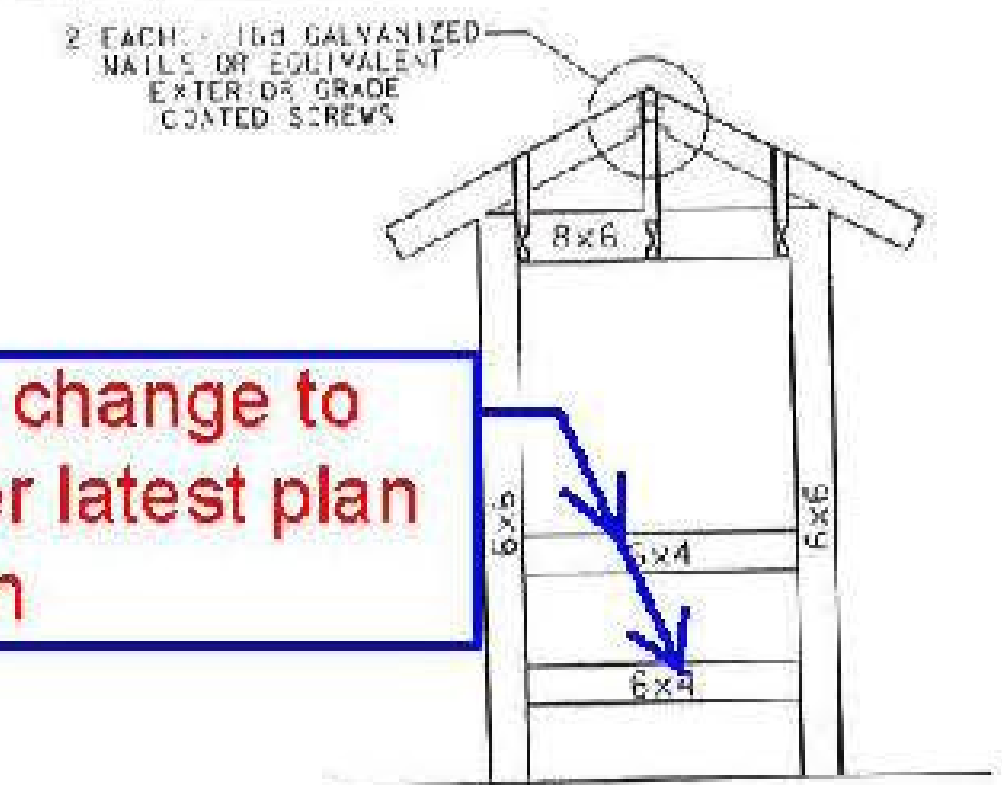
END ELEVATION (TYP.)  
SCALE: 1/2" = 1'-0"



FRONT/INTERIOR ELEVATION  
SCALE: 1/2" = 1'-0"

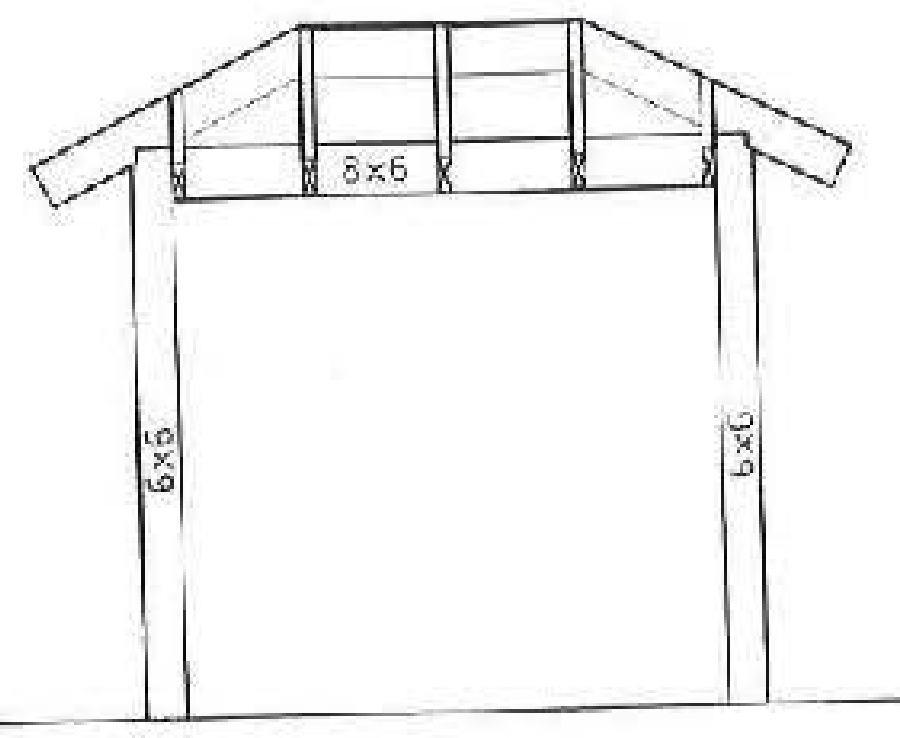


REAR ELEVATION  
SCALE: 1/2" = 1'-0"

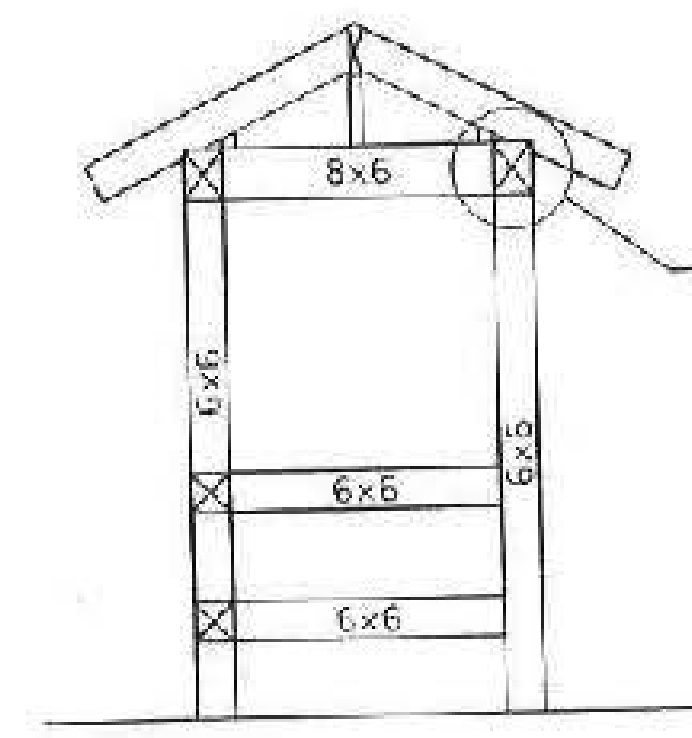


END FRAMING - ELEVATION  
SCALE: 1/2" = 1'-0"

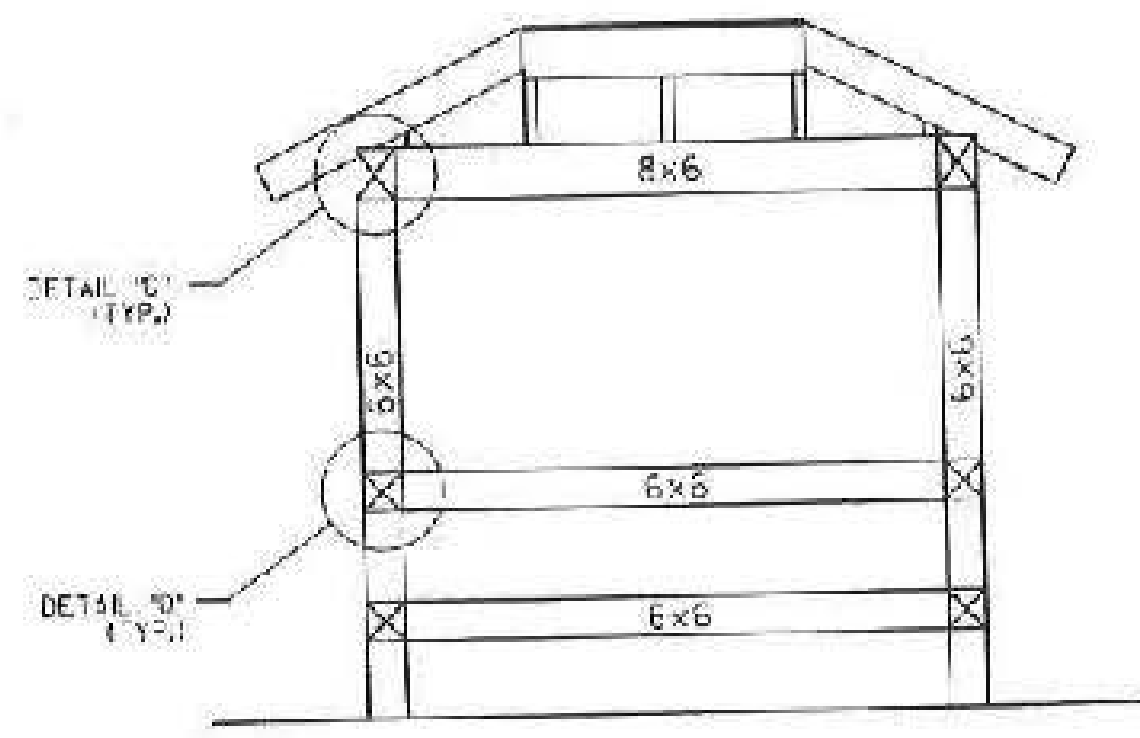
please change to 6X6 per latest plan revision



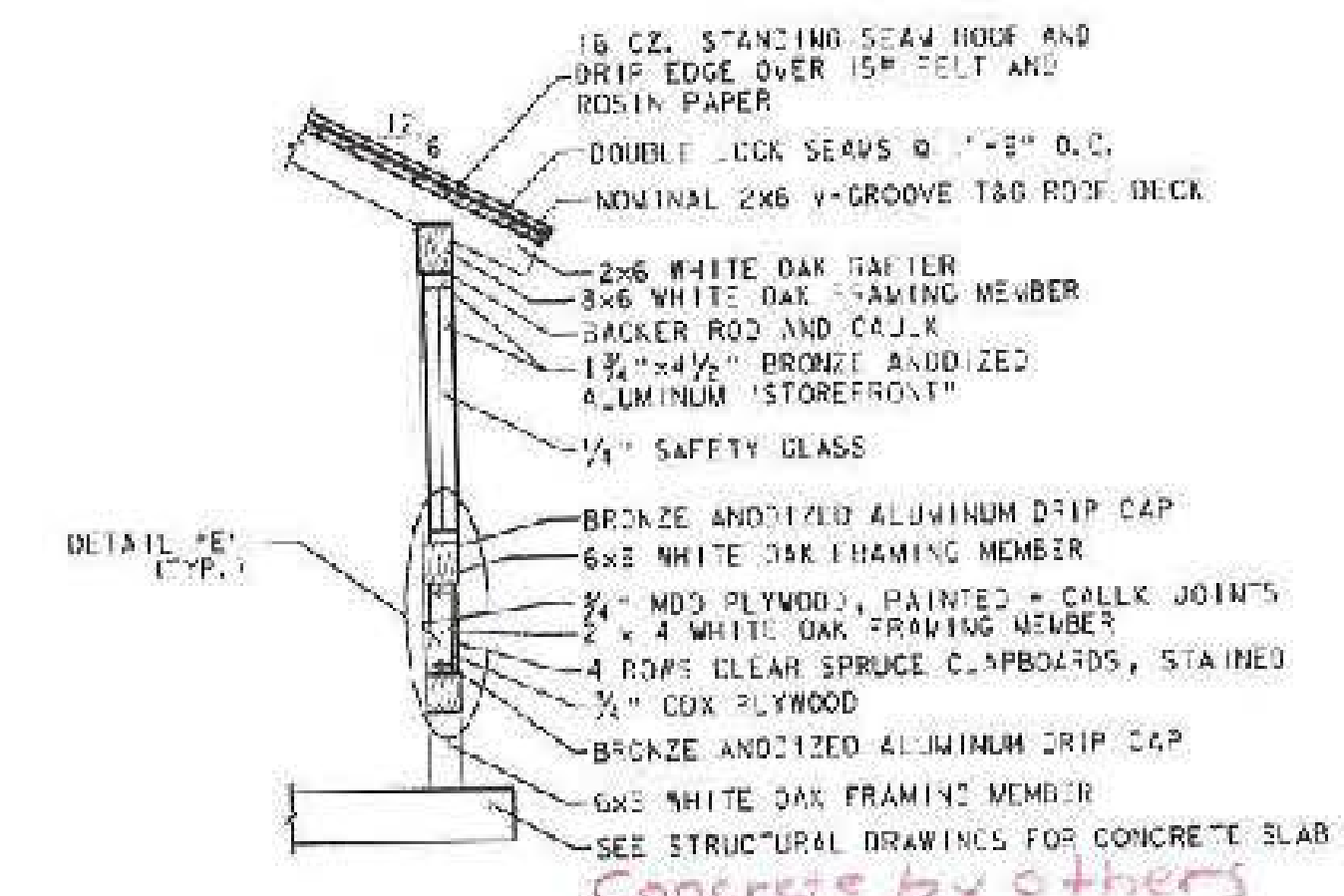
FRONT/REAR FRAMING - ELEVATION  
SCALE: 1/2" = 1'-0"



END FRAMING - SECTION  
SCALE: 1/2" = 1'-0"

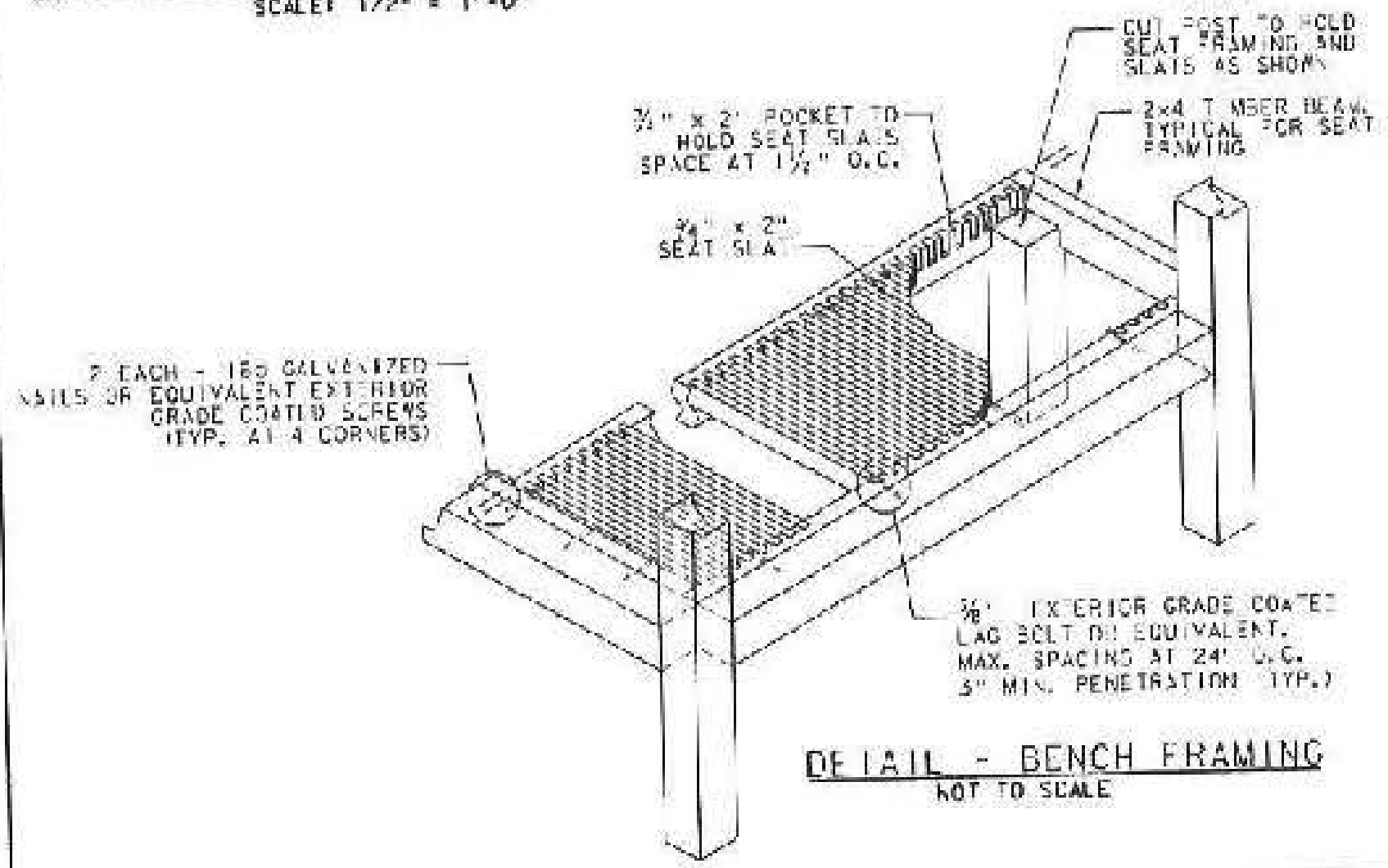


FRONT/REAR FRAMING - SECTION  
SCALE: 1/2" = 1'-0"



TYPICAL WALL SECTION  
SCALE: 1/2" = 1'-0"

- NOTES:  
1. JACK AND COMMON RAFTERS ARE 2x6.  
2. HIP RAFTERS ARE 2x8  
3. RIDGE BEAM IS 2x8



DETAIL - BENCH FRAMING  
NOT TO SCALE

Ingram Construction Corp.  
Approved for Submittal  
Date 4/14/15 By SPC

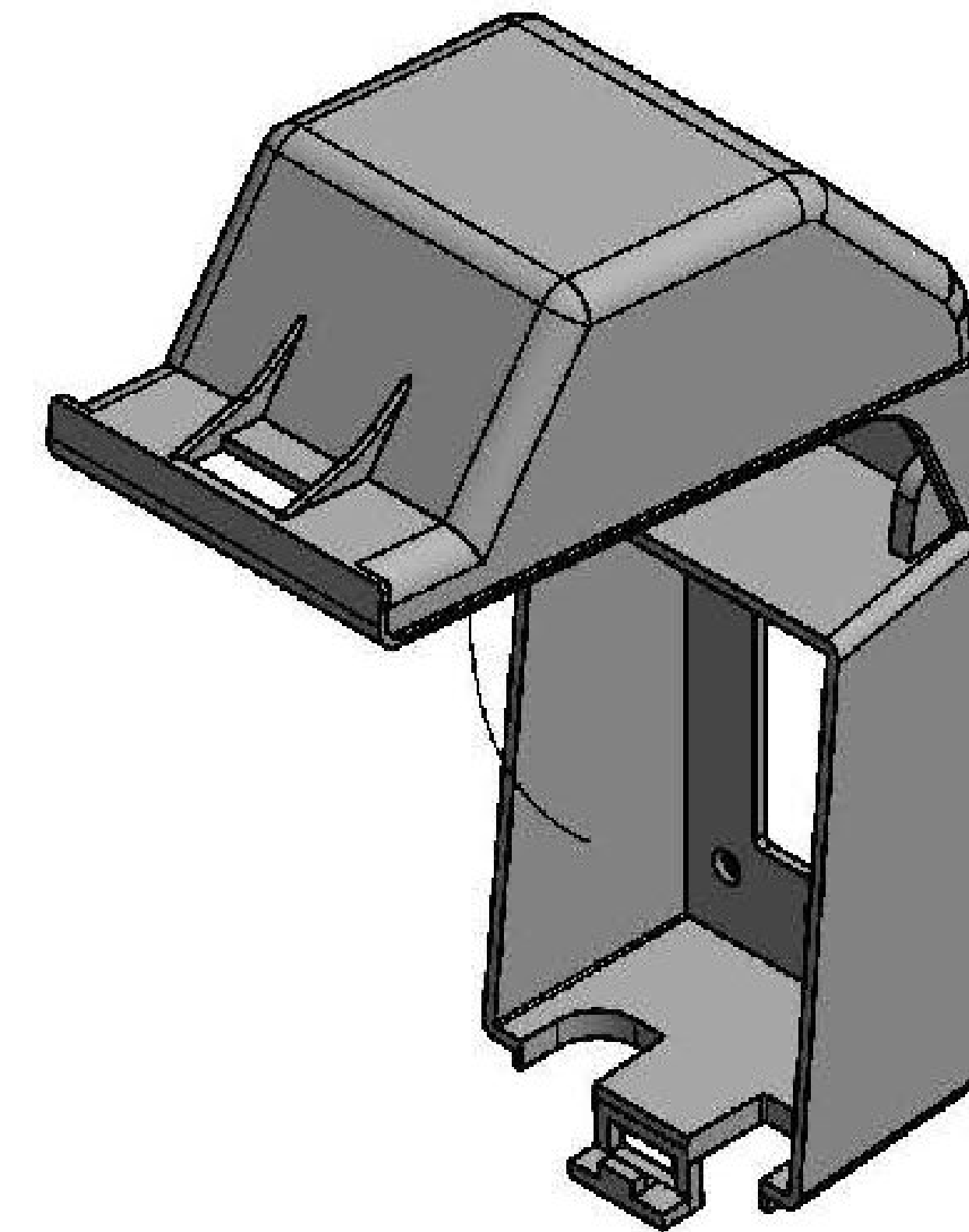
NOTE:  
FOR DETAILS B & C, SEE BUS SHELTER DETAILS 3.  
FOR DETAILS D & E, SEE BUS SHELTER DETAILS 4.  
ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED.

PROJECT NAME:	SPRINGFIELD
PROJECT NUMBER:	CMG PARK (32)
FILE NAME:	209257.dwg
PROJECT LEADER:	M. J. J.
DESIGNED BY:	J. LANGFORD
BUS SHELTER DETAILS:	2
PLOT DATE:	5/25/2014
DRAWN BY:	C. BURTON
CHECKED BY:	G. EGGLE
SHEET:	26 OF 43

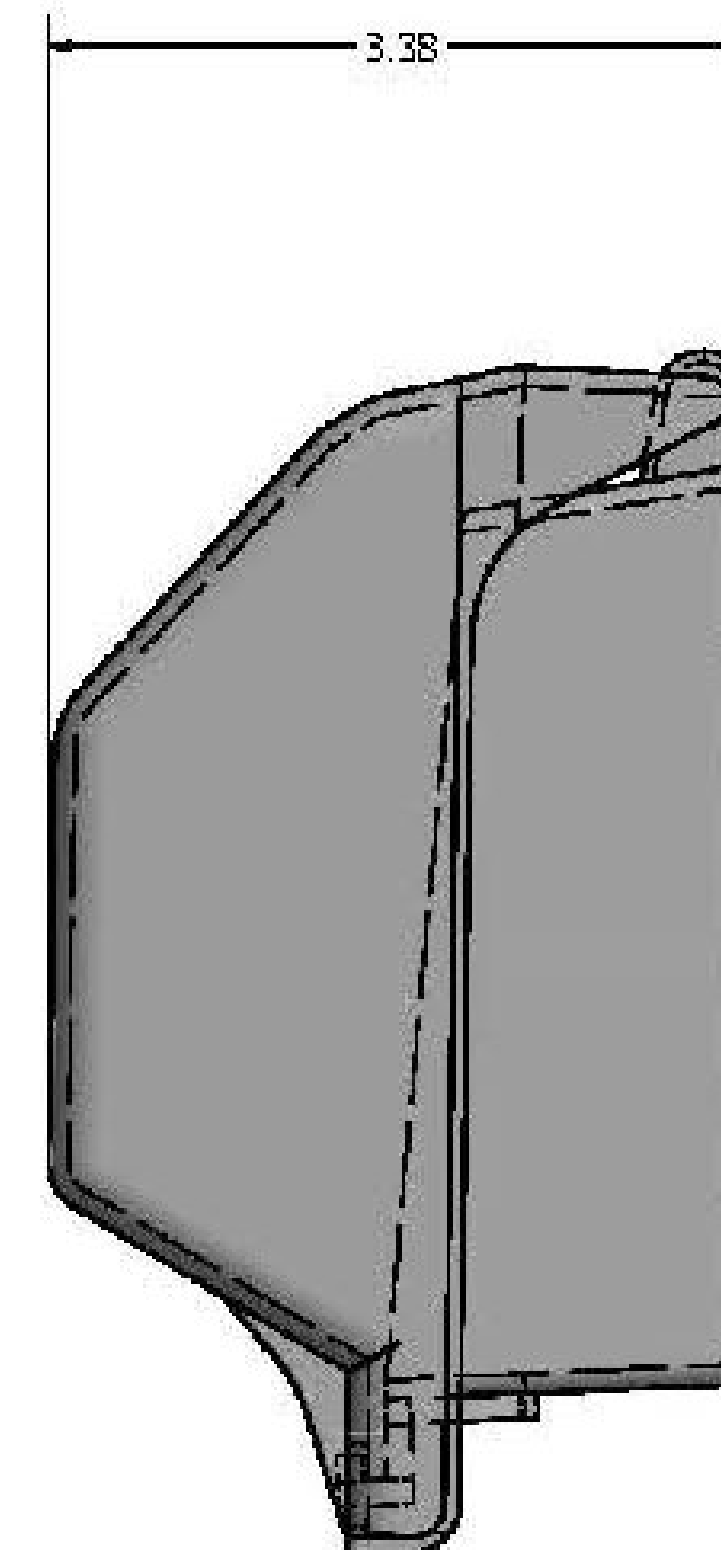
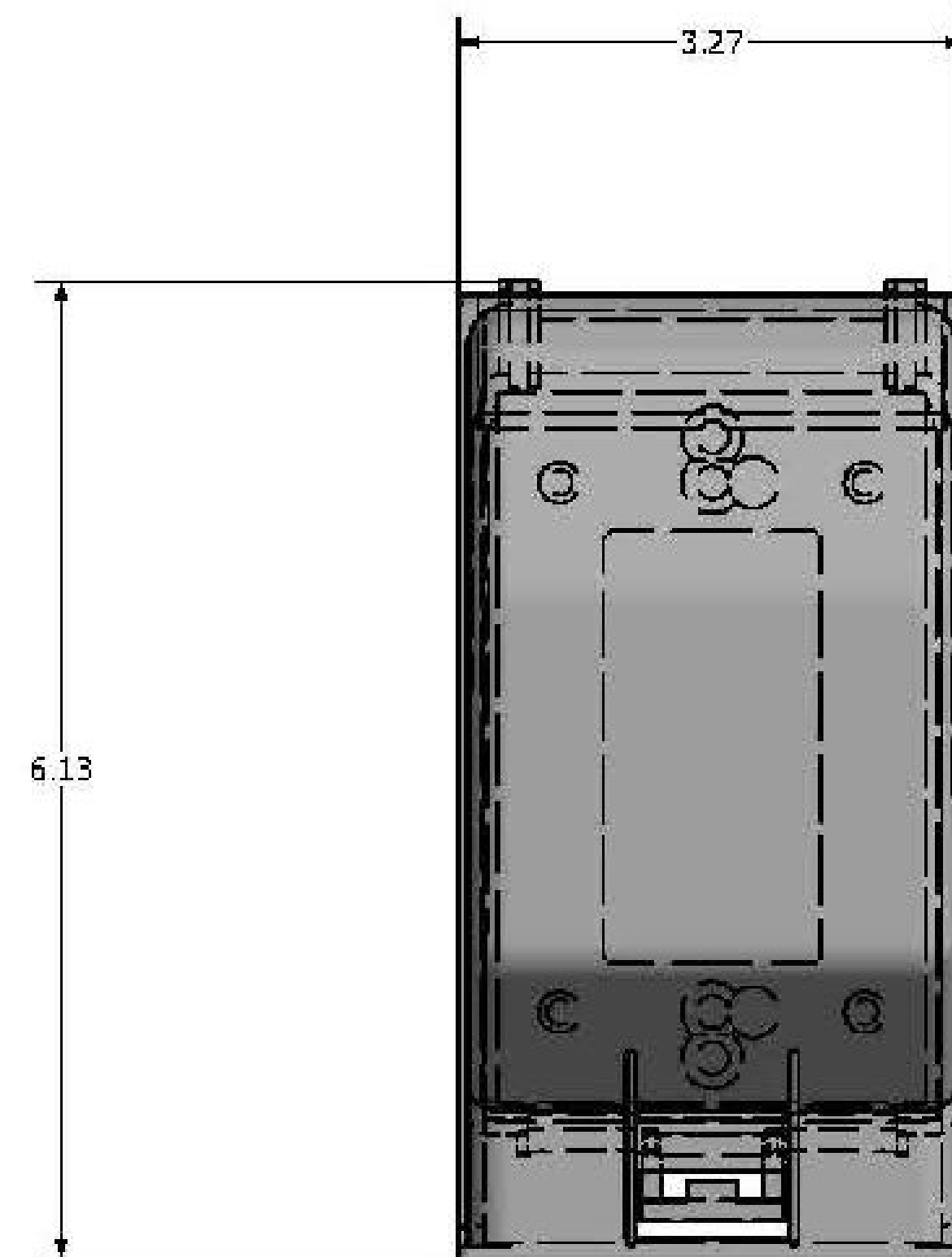


**NOTES:**

1. WEATHER PROOF WHILE IN USE
2. HEAVY DUTY ALL METAL CONSTRUCTION
3. LOCKABLE SECURITY COVER
4. 3 1/4 IN. INTERNAL DEPTH
5. FOR USE WITH GFCI, DUPLEX, SWITCH, OR SINGLE RECEPTACLES.
6. MEETS NEC EXTRA DUTY REQUIREMENTS
7. PROVIDED WITH ADAPTER PLATES AND FOAM GASKET.



✓ WEATHERPROOF COVER  
OPEN POSITION



**UNIVERSAL METAL WEATHERPROOF COVER**

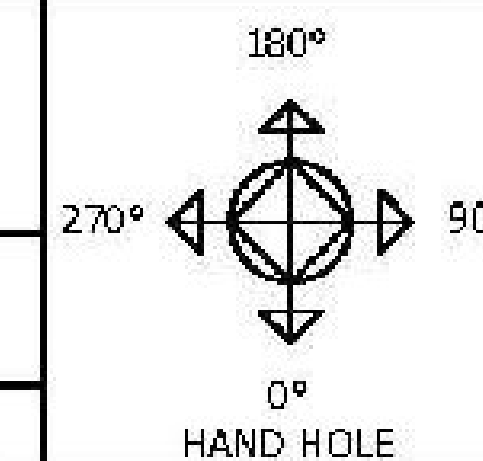
**FINISH: COVER SHALL HAVE A POLYESTER POWDER COAT FINISH TO MATCH POLE.** ✓

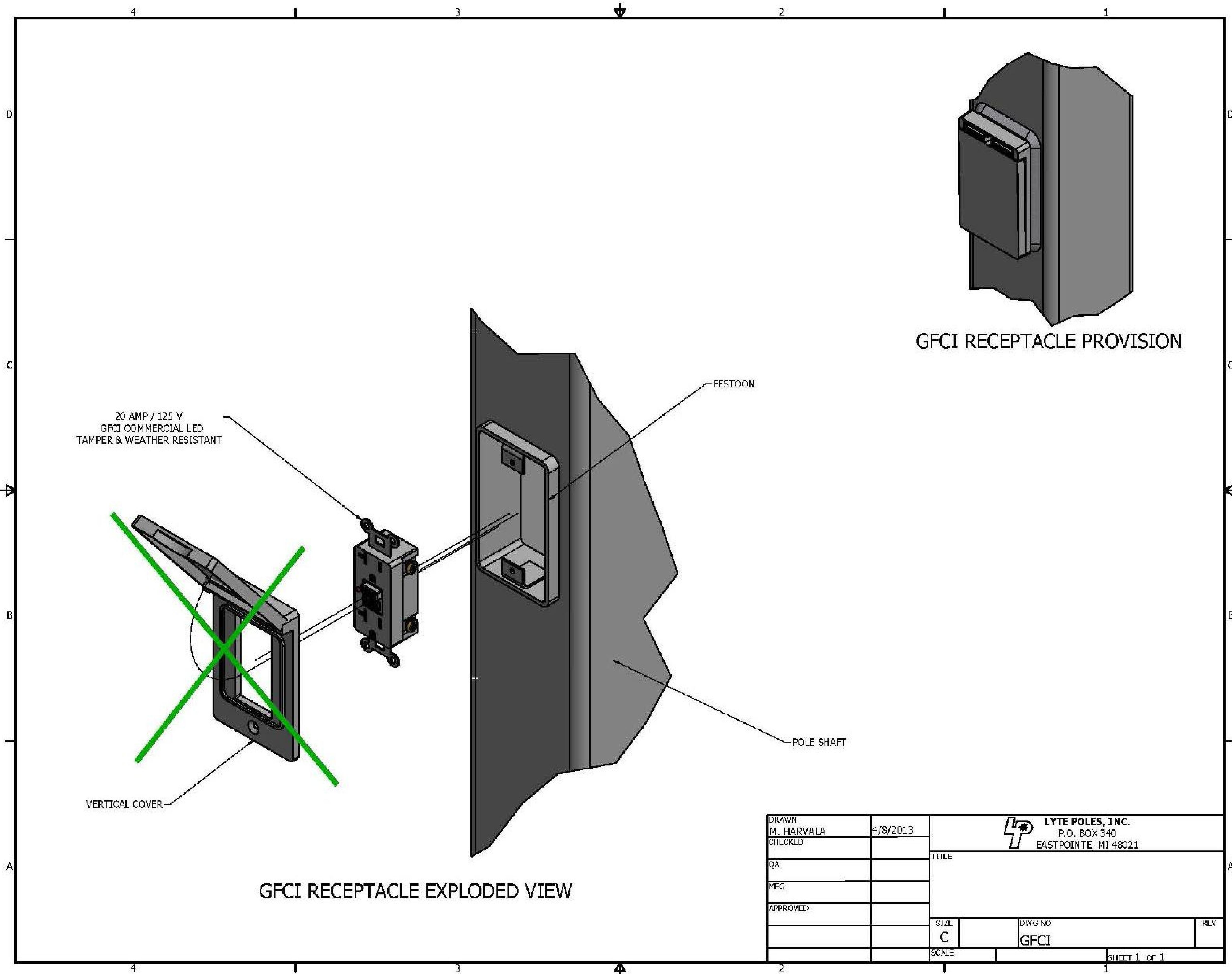


P.O. BOX 340 • EASTPOINTE, MI 48021  
PHONE: 586-771-4610 • FAX: 586-771-5527  
WWW.LYTEPOLESINC.COM

DRAWN: M. HARVALA	4/14/2014
CHECKED:	
REVISION:	DATE:
APPROVED:	
QUOTE:	
S.O.#	
REF:	SCALE: NONE

TITLE:	
CATALOG NO.	
DWG NO: IUC	SIZE C
	SHEET 1 OF 1





20 AMP / 125 V  
GFCI COMMERCIAL LED  
TAMPER & WEATHER RESISTANT


VERTICAL COVER

FESTOON

POLE SHAFT

GFCI RECEPTACLE PROVISION

GFCI RECEPTACLE EXPLODED VIEW

DRAWN M. HARVALA	4/8/2013	 <b>LYTE POLES, INC.</b> P.O. BOX 340 EASTPOINTE, MI 48021	
CHKD GILKELD			
QA		TITLE	
MFG			
APPROVED			
		SIZE <b>C</b>	DWG NO <b>GFCI</b>
		SCALE	RLV SHEET 1 of 1



1200 Elm Street  
 Unit 412  
 Manchester, NH 03101

Phone: 877-886-2843  
 Fax: 877-886-2844

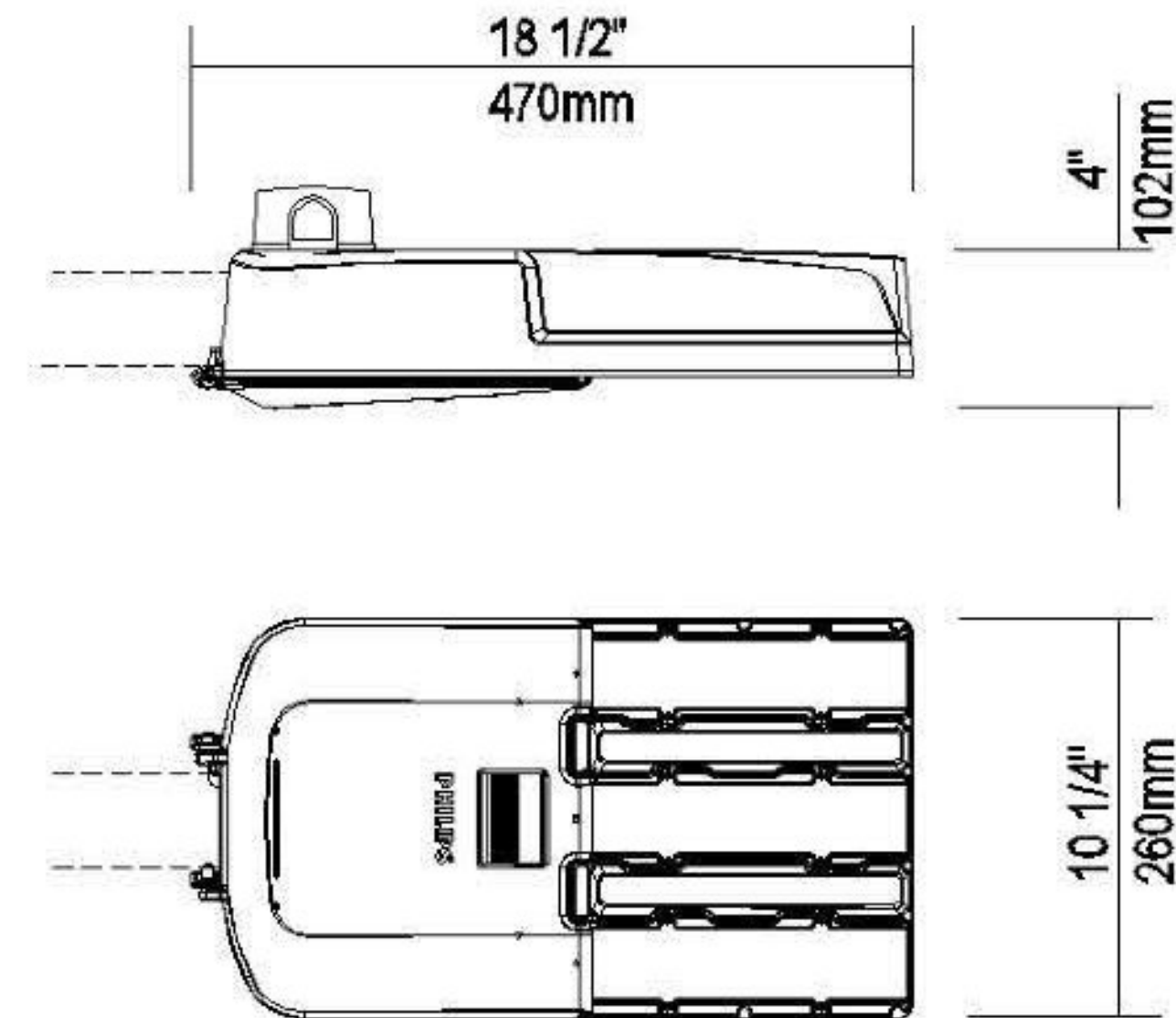
To: GRANITE CITY - BENNINGTON VT 14 MORSE ROAD BENNINGTON, VT 05201		<b>Submittal</b>
Attn: MARK TIMMERMAN		
		Source Quote: SPFLDPRKAN Entry Date: 3/24/2015 Project: SPRINGFIELD PARK AND RIDE
Original Submittal for Approval 1 Copy of Submittals is Attached		
Type	Mfg	Description
→ A	Philips Lumec	SYM-32W32LED4K-R-LE3-UNIV-DMG-WC-10-RC-SP-1-PH8-BR
A	Lytepoles	405-7015-18-YD-MODTENON-SSAB-IDTAG-CC
A	Lytepoles	405-7015-18-YD-GFI-MODTENON-SSAB-IDTAG-CC
→ B	Philips Lumec	SYM-24W16LED4K-R-LE3-UNIV-DMG-WC-10-RC-SP-1-PH8-BR
B	Lytepoles	405-7015-18-YD-(2)GFI-(2)MODTENON-SSAB-IDTAG-CC

APPROVED: Approval of drawings and/or procedures indicates concurrence with the information presented and does not relieve the Contractor or Fabricator of compliance with all specifications and code requirements		
APPROVED AS NOTED	X	
REVISE AND RESUBMIT		
NOT REVIEWED		
Date: 25 March 2015		
Signature: M Crowley		
<p><small>This review by Stantec Consulting Services Inc. is for the sole purpose of ascertaining conformance with the general design concept. This review shall not mean that Stantec Consulting Services Inc. approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor. Submitting same, and such review shall not relieve the Contractor of his responsibility for errors or omissions in the shop drawing or of his responsibility for meeting all requirements of the Contract Documents. The contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to the fabrication processes or to techniques of construction and installation and for coordination of the work of all subtrades.</small></p>		

Remarks:

Springfield Park Ride (Reference=32377-2)

**FIXTURE TYPE A**  
**SL7, SL8, SL9, SL10, SL11, SL12, SL13, SL14**



EPA: 0.513 sq ft / weight: 10.4 lb (4.7 kg)  
Note: 3D image may not represent color or option selected.  
Logos above include link, click to access.

Qty	1	Luminaire	SVM-32W32LED4K-R-LE3-UNIV-DMG-RC-WC10-SP1-BR
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**Description of Components:**

**Housing:** Made of a die cast Aluminum alloy (A360), 0.100" (2.5mm) minimum thickness. Fits on a 1.66" (42mm) O.D. (1.25" NPS), 1.9" (48mm) O.D. (1.5" NPS) or 2 3/8" (60mm) O.D. (2" NPS) by 5 1/4" (133mm) minimum long tenon. Comes with a zinc plated clamp fixed by 2 zinc plated hexagonal bolts 3/8 16 UNC for ease of installation. Provides an easy step adjustment of +/- 5° tilt in 2.5° increments. A quick release, tool less entry, hinged, removable door opens downward to provide access to electronic components and to a terminal block. Door is secured to prevent accidental dropping or disengagement. A clearance of 8" (203mm) at the rear is required in order to remove the door. Complete with a bird guard protecting against birds and similar intruders and an ANSI label to identify wattage and source (both included in box).

**Light Engine:** Composed of 4 main components: **Heat Sink / LED Module / Optical System / Driver**  
Electrical components are RoHS compliant, IP66 sealed light engine equipped with Philips Lumileds LUXEON R LEDs. LEDs tested by ISO 17025-2005 accredited lab in accordance with IESNA LM-80 guidelines in compliance with EPA ENERGY STAR, extrapolations in accordance with IESNA TM-21. Metal core board ensures greater heat transfer and longer lifespan.

**Heat Sink:** Built-in the housing, the innovative high efficacy heat sink chimney design ensures superior cooling by natural convection air flow pattern always close to LEDs and driver optimising their efficiency and life. Product does not use any cooling device with moving parts (only passive cooling). Wide channels enable natural cleaning and removal of dirt and debris. Entire luminaire is rated for operation in ambient temperature of -40°C / -40°F up to +40°C / +104°F.

**Lamp: LED Module (Included),** LED type Philips Lumileds LUXEON R. Composed of 32 high-performance white LEDs. Color temperature as per ANSI bin 4000 Kelvin nominal (3985K +/- 275K), CRI 70 Min. 75 Typical.

**Optical System:** (LE3), IES type III (asymmetrical). Composed of high-performance optical grade PMMA acrylic refractor

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**Springfield Park Ride (Reference 32377-2)**

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lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. System is rated IP66. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance. Dark Sky compliant with 0% uplight and U0 per IESNA TM-15.

**Driver:** High power factor of 95%. Electronic driver, operating range 50/60 Hz. Auto-adjusting universal voltage input from 120 to 277 VAC rated for both application line to line or line to neutral, Class I, THD of 20% max. **(DMG)**, Dimming compatible 0-10 volts.

The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built-in driver surge protection of 2.5kV (min).

**Driver Options: (DMG) Integrated Feature,** Dimming compatible 0-10 volts. For applicable warranty, certification and operation guide see Philips Lumec dimmable luminaire specification document for unapproved device installed by other. To get document, click on this link: [Specification document](http://www.lumec.com/Lumec3DV2/PdfWebLink/Philips%20Lumec%20dimmable%20luminaire%20specification%20document%20for%20unapproved%20device%20installed%20by%20other.pdf) or go on web site on this address: <http://www.lumec.com/Lumec3DV2/PdfWebLink/Philips Lumec dimmable luminaire specification document for unapproved device installed by other.pdf>

**Control Options: For this specific wattage, resistor on driver dimming port must be removed to use dimming option with controls. Note that this fixture will return to maximum output drive current when resistor is removed.**

**Luminaire Options: (RC) Integrated Feature,** Receptacle for a twist-lock photoelectric cell or a shorting cap. Use of photocell or shorting cap is required to ensure proper illumination. **(SP1)**, Integral surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA. **(WC 10) Integrated Feature,** Luminaire comes with a warranty of 10 years on product and finish. See [http://www.usa.lighting.philips.com/connect/tools\\_literature/warranties.wpd](http://www.usa.lighting.philips.com/connect/tools_literature/warranties.wpd) for details.

**Luminaire Useful Life:** Refer to IES files for energy consumption and delivered lumens for each option. Based on ISTMT in-situ thermal testing in accordance with UL1598 and UL8750, Philips Advance data and Philips Lumileds LM-80/TM-21 data, expected to reach 100,000 + hours with >L70 lumen maintenance @ 25°C.

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Springfield Park Ride (Reference 32377-2)

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Qty	1	Accessories	PH8
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**Description of Components:**

**Accessories:** (PH8), Photoelectric Cell, Twist-lock Type.

**Note:** The accessories will be shipped separately from the luminaire box.

Miscellaneous
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**Description of Components:**

**Wiring:** The connection of the luminaire is done using a terminal block connector 600V, 85A for use with #2-14 AWG. wires from the primary circuit, located inside the housing. Due to the inrush current that occurs with electronic drivers, recommend using a time-delay or slow blow fuse to avoid unnecessary and unwanted fuse blowing that can occur with fast-acting fuses.

**Hardware:** All exposed screws shall be steel zinc plated with Ceramic primer-seal basecoat to reduce seizing of the parts. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

**Finish: Textured color to be advised (Product Standard Color only):** \_\_\_\_\_ (COLTX) and in accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with  $\pm 1$  mils/24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard.

The surface treatment achieves a minimum of 2000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

**Note: IMPORTANT: All missing details must be clearly specified on the return of these approval drawings. Thank you for your cooperation.**

COLOR: \_\_\_\_\_

**LED products manufacturing standard:** The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340-5-1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

**Vibration Resistance:** The SVM meets the **ANSI C 136.31**, American National Standard for Roadway Luminaire Vibration specifications for Bridge/overpass applications. (Tested for 3G over 100 000 cycles by an independent lab)

**Web site information details:** Click on any specific information details you need: / [Installation pictures](#) / [cULus Certification](#) / [Dynadimmer specification](#) / [Warranty](#)

**Certifications and Compliance:** cULus Listed for Canada and USA. Luminaire meets DOE and MSSLC Model Specification for LED Roadway Luminaires.

LED light engine technical information information for SVM												
LED = Philips Lumileds Luxeon R and T, CRI = 75, CCT = 4000K (+/- 350K)												
System (LED + driver) rated life = 100,000 hrs <sup>1</sup>												
Lamp	Typical delivered lumens	Typical system wattage <sup>2</sup> (W)	Typical current @ 120 V (A)	Typical current @ 208 V (A)	Typical current @ 240 V (A)	Typical current @ 277 V (A)	Typical current @ 347 V (A)	Typical current @ 480 V (A)	LED current (mA)	HID equivalent <sup>3</sup>	Luminaire Efficacy Rating (lm/W)	BUG rating
16W16LED4K-R-LE2	1761	19	0.160	0.100	0.090	0.082	N/A	N/A	350	50-70W	100	B1 U0 G1
16W16LED4K-R-LE3	1870	19	0.160	0.100	0.090	0.082	N/A	N/A	350	50-70W	107	B1 U0 G1
16W16LED4K-R-LE5	1784	19	0.160	0.100	0.090	0.082	N/A	N/A	350	50-70W	102	B2 U0 G0
22W16LED4K-R-LE2	2359	25	0.210	0.125	0.115	0.105	N/A	N/A	470	50-70W	95	B1 U0 G1
22W16LED4K-R-LE3	2504	25	0.210	0.125	0.115	0.105	N/A	N/A	470	50-70W	101	B1 U0 G1
22W16LED4K-R-LE5	2390	25	0.210	0.125	0.115	0.105	N/A	N/A	470	50-70W	96	B2 U0 G1
24W16LED4K-R-LE2	2511	27	0.225	0.135	0.120	0.110	N/A	N/A	530	70-100W	94	B1 U0 G1
24W16LED4K-R-LE3	2666	27	0.225	0.135	0.120	0.110	N/A	N/A	530	70-100W	100	B1 U0 G1
24W16LED4K-R-LE5	2544	27	0.225	0.135	0.120	0.110	N/A	N/A	530	70-100W	95	B2 U0 G1
30W16LED4K-R-LE2	3075	37	0.290	0.175	0.150	0.135	N/A	N/A	700	70-100W	87	B1 U0 G1
30W16LED4K-R-LE3	3295	37	0.290	0.175	0.150	0.135	N/A	N/A	700	70-100W	92	B1 U0 G1
30W16LED4K-R-LE5	3145	37	0.290	0.175	0.150	0.135	N/A	N/A	700	70-100W	88	B2 U0 G1
32W32LED4K-R-LE2	3618	37	0.300	0.185	0.165	0.155	0.105	0.090	350	70-100W	103	B1 U0 G1
32W32LED4K-R-LE3	3754	37	0.300	0.185	0.165	0.155	0.105	0.090	350	70-100W	107	B1 U0 G1
32W32LED4K-R-LE5	3404	37	0.300	0.185	0.165	0.155	0.105	0.090	350	70-100W	97	B2 U0 G1
48W32LED4K-R-LE2	5309	54	0.450	0.270	0.240	0.215	0.160	0.130	530	70-100W	100	B1 U0 G1
48W32LED4K-R-LE3	5509	54	0.450	0.270	0.240	0.215	0.160	0.130	530	70-100W	104	B1 U0 G1
48W32LED4K-R-LE5	4995	54	0.450	0.270	0.240	0.215	0.160	0.130	530	70-100W	94	B3 U0 G1
60W32LED4K-R-LE2	6619	72	0.595	0.340	0.295	0.265	0.210	0.160	700	100-150W	94	B2 U0 G1
60W32LED4K-R-LE3	6924	72	0.595	0.340	0.295	0.265	0.210	0.160	700	100-150W	97	B2 U0 G2
60W32LED4K-R-LE5	6280	72	0.595	0.340	0.295	0.265	0.210	0.160	700	100-150W	89	B3 U0 G1
48W48LED4K-R-LE2	5090	52	0.440	0.260	0.250	0.230	0.160	0.130	350	70-100W	105	B1 U0 G1
48W48LED4K-R-LE3	5224	52	0.440	0.260	0.250	0.230	0.160	0.130	350	70-100W	107	B1 U0 G1
48W48LED4K-R-LE5	5097	52	0.440	0.260	0.250	0.230	0.160	0.130	350	70-100W	105	B3 U0 G1
72W48LED4K-R-LE2	7705	80	0.660	0.390	0.350	0.310	0.225	0.170	530	100-150W	99	B2 U0 G2
72W48LED4K-R-LE3	7909	80	0.660	0.390	0.350	0.310	0.225	0.170	530	100-150W	101	B2 U0 G2
72W48LED4K-R-LE5	7717	80	0.660	0.390	0.350	0.310	0.225	0.170	530	100-150W	99	B3 U0 G2
90W48LED4K-R-LE2	9854	107	0.890	0.515	0.455	0.390	0.305	0.225	700	150-175W	95	B2 U0 G2
90W48LED4K-R-LE3	10113	107	0.890	0.515	0.455	0.390	0.305	0.225	700	150-175W	98	B2 U0 G2
90W48LED4K-R-LE5	9868	107	0.890	0.515	0.455	0.390	0.305	0.225	700	150-175W	95	B4 U0 G4
140W48LED4K-T-LE2	14556	160	1.330	0.760	0.665	0.575	N/A	N/A	1050	200-250W	94	B3-U0-G2
140W48LED4K-T-LE3	15200	160	1.330	0.760	0.665	0.575	N/A	N/A	1050	200-250W	98	B3-U0-G2
140W48LED4K-T-LE5	14880	160	1.330	0.760	0.665	0.575	N/A	N/A	1050	200-250W	96	B4-U0-G2

<sup>1</sup> L70 = 100,000 hrs (at ambient temperature = 25°C and forward current = 700 mA)  
<sup>2</sup> System wattage includes the lamp and the LED driver.  
<sup>3</sup> Equivalence should always be confirmed by a photometric layout

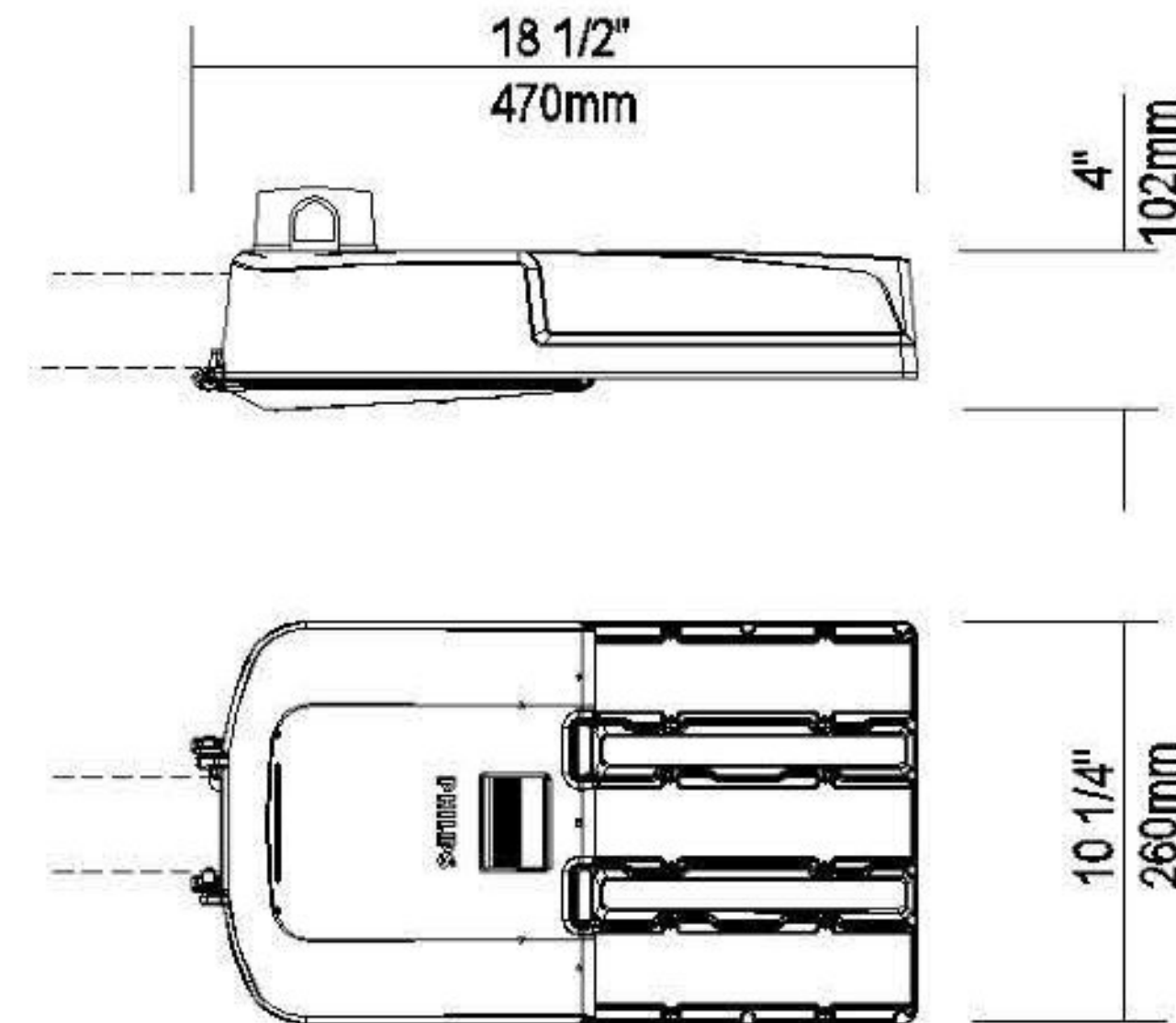
Note : Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Philips.



Springfield Park Ride Type B (Reference=35944-1)

**FIXTURE TYPE B**

**SL1, SL2, SL3, SL4, SL5, SL6**



EPA: 0.513 sq ft / weight: 10.4 lb (4.7 kg)  
Note: 3D image may not represent color or option selected.  
Logos above include link, click to access.

Qty	1	Luminaire	SVM-24W16LED4K-R-LE3-UNIV-DMG-RC-WC10-SP1-BR
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**Description of Components:**

**Housing:** Made of a die cast Aluminum alloy (A360), 0.100" (2.5mm) minimum thickness. Fits on a 1.66" (42mm) O.D. (1.25" NPS), 1.9" (48mm) O.D. (1.5" NPS) or 2 3/8" (60mm) O.D. (2" NPS) by 5 1/4" (133mm) minimum long tenon. Comes with a zinc plated clamp fixed by 2 zinc plated hexagonal bolts 3/8 16 UNC for ease of installation. Provides an easy step adjustment of +/- 5° tilt in 2.5° increments. A quick release, tool less entry, hinged, removable door opens downward to provide access to electronic components and to a terminal block. Door is secured to prevent accidental dropping or disengagement. A clearance of 8" (203mm) at the rear is required in order to remove the door. Complete with a bird guard protecting against birds and similar intruders and an ANSI label to identify wattage and source (both included in box).

**Light Engine:** Composed of 4 main components: **Heat Sink / LED Module / Optical System / Driver**  
Electrical components are RoHS compliant, IP66 sealed light engine equipped with Philips Lumileds LUXEON R LEDs. LEDs tested by ISO 17025-2005 accredited lab in accordance with IESNA LM-80 guidelines in compliance with EPA ENERGY STAR, extrapolations in accordance with IESNA TM-21. Metal core board ensures greater heat transfer and longer lifespan.

**Heat Sink:** Built-in the housing, the innovative high efficacy heat sink chimney design ensures superior cooling by natural convection air flow pattern always close to LEDs and driver optimising their efficiency and life. Product does not use any cooling device with moving parts (only passive cooling). Wide channels enable natural cleaning and removal of dirt and debris. Entire luminaire is rated for operation in ambient temperature of -40°C / -40°F up to +40°C / +104°F.

**Lamp: LED Module (Included),** LED type Philips Lumileds LUXEON R. Composed of 16 high-performance white LEDs. Color temperature as per ANSI bin 4000 Kelvin nominal (3985K +/- 275K), CRI 70 Min. 75 Typical.

**Optical System:** (LE3), IES type III (asymmetrical). Composed of high-performance optical grade PMMA acrylic refractor

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**Springfield Park Ride Type B (Reference=35944-1)**

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lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. System is rated IP66. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance. Dark Sky compliant with 0% uplight and U0 per IESNA TM-15.

**Driver:** High power factor of 95%. Electronic driver, operating range 50/60 Hz. Auto-adjusting universal voltage input from 120 to 277 VAC rated for both application line to line or line to neutral, Class I, THD of 20% max. **(DMG)**, Dimming compatible 0-10 volts.

The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built-in driver surge protection of 2.5kV (min).

**Driver Options: (DMG) Integrated Feature,** Dimming compatible 0-10 volts. For applicable warranty, certification and operation guide see Philips Lumec dimmable luminaire specification document for unapproved device installed by other. To get document, click on this link: [Specification document](http://www.lumec.com/Lumec3DV2/PdfWebLink/Philips%20Lumec%20dimmable%20luminaire%20specification%20document%20for%20unapproved%20device%20installed%20by%20other.pdf) or go on web site on this address: <http://www.lumec.com/Lumec3DV2/PdfWebLink/Philips Lumec dimmable luminaire specification document for unapproved device installed by other.pdf>

**Control Options: For this specific wattage, resistor on driver dimming port must be removed to use dimming option with controls. Note that this fixture will return to maximum output drive current when resistor is removed.**

**Luminaire Options: (RC) Integrated Feature,** Receptacle for a twist-lock photoelectric cell or a shorting cap. Use of photocell or shorting cap is required to ensure proper illumination. **(SP1)**, Integral surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA. **(WC 10) Integrated Feature,** Luminaire comes with a warranty of 10 years on product and finish. See [http://www.usalighting.philips.com/connect/tools\\_literature/warranties.wpd](http://www.usalighting.philips.com/connect/tools_literature/warranties.wpd) for details.

**Luminaire Useful Life:** Refer to IES files for energy consumption and delivered lumens for each option. Based on ISTMT in-situ thermal testing in accordance with UL1598 and UL8750, Philips Advance data and Philips Lumileds LM-80/TM-21 data, expected to reach 100,000 + hours with >L70 lumen maintenance @ 25°C.

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**Springfield Park Ride Type B (Reference=35944-1)**

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Qty	1	Accessories	PH8
-----	---	-------------	-----

**Description of Components:**

**Accessories:** (PH8), Photoelectric Cell, Twist-lock Type.

**Note:** The accessories will be shipped separately from the luminaire box.

Miscellaneous
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**Description of Components:**

**Wiring:** The connection of the luminaire is done using a terminal block connector 600V, 85A for use with #2-14 AWG. wires from the primary circuit, located inside the housing. Due to the inrush current that occurs with electronic drivers, recommend using a time-delay or slow blow fuse to avoid unnecessary and unwanted fuse blowing that can occur with fast-acting fuses.

**Hardware:** All exposed screws shall be steel zinc plated with Ceramic primer-seal basecoat to reduce seizing of the parts. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

**Finish:** Color to be **medium grey (GY3)** and in accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with  $\pm 1$  mils/24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard.

The surface treatment achieves a minimum of 2000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

**LED products manufacturing standard:** The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340-5-1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

**Vibration Resistance:** The SVM meets the **ANSI C136.31**, American National Standard for Roadway Luminaire Vibration specifications for Bridge/overpass applications. (Tested for 3G over 100 000 cycles by an independent lab)

**Web site information details:** Click on any specific information details you need: / [Installation pictures](#) / [cULus Certification](#) / [Dynadimmer specification](#) / [Warranty](#)

**Certifications and Compliance:** cULus Listed for Canada and USA. Luminaire meets DOE and MSSLC Model Specification for LED Roadway Luminaires.

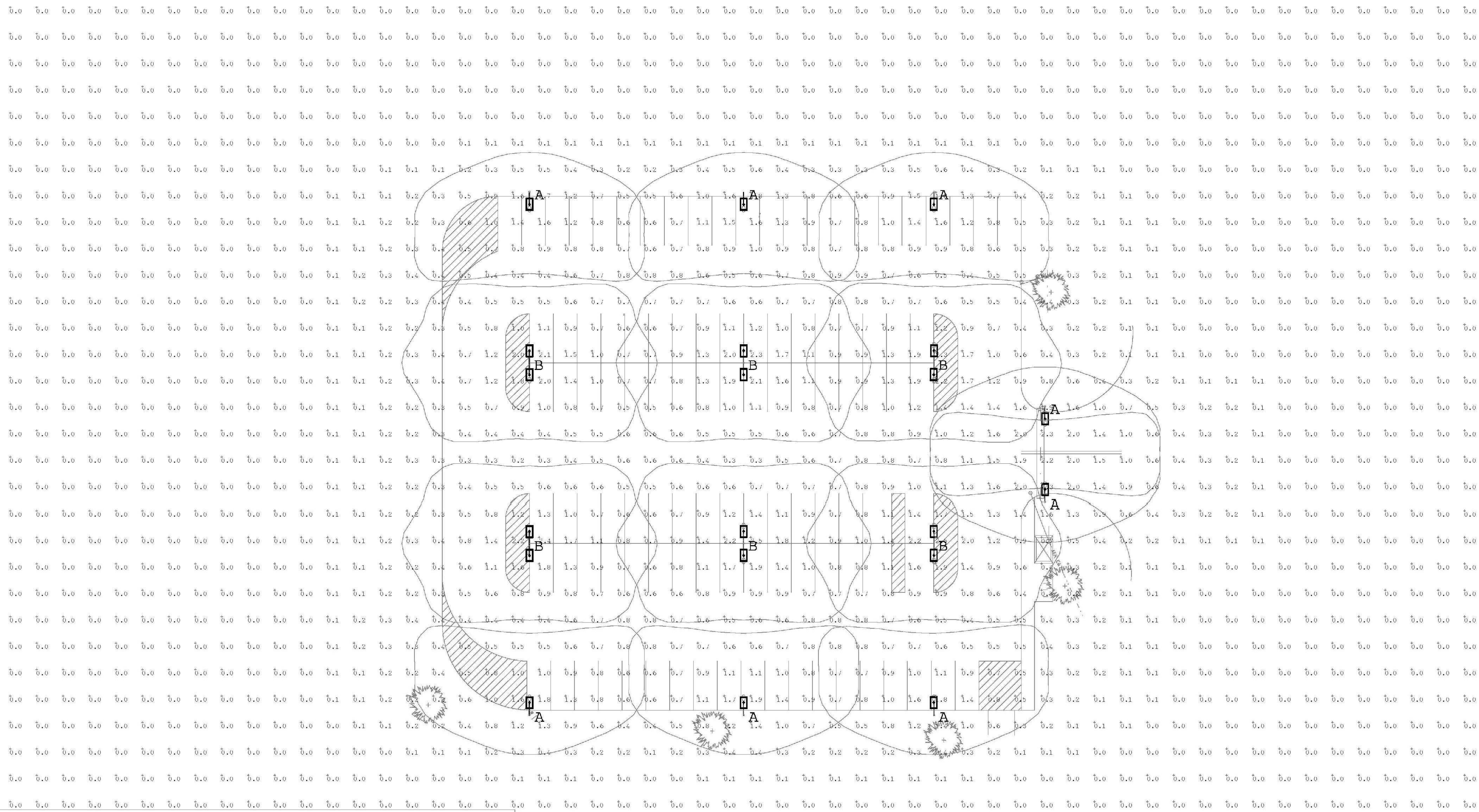
Springfield Park Ride Type B (Reference=35944-1)

LED light engine technical information information for SVM												
LED = Philips Lumileds Luxeon R and T, CRI = 75, CCT = 4000K (+/- 350K)												
System (LED + driver) rated life = 100,000 hrs <sup>1</sup>												
Lamp	Typical delivered lumens	Typical system wattage <sup>2</sup> (W)	Typical current @ 120 V (A)	Typical current @ 208 V (A)	Typical current @ 240 V (A)	Typical current @ 277 V (A)	Typical current @ 347 V (A)	Typical current @ 480 V (A)	LED current (mA)	HID equivalent <sup>3</sup>	Luminaire Efficacy Rating (lm/W)	BUG rating
16W16LED4K-R-LE2	1761	19	0.160	0.100	0.090	0.082	N/A	N/A	350	50-70W	100	B1 U0 G1
16W16LED4K-R-LE3	1870	19	0.160	0.100	0.090	0.082	N/A	N/A	350	50-70W	107	B1 U0 G1
16W16LED4K-R-LE5	1784	19	0.160	0.100	0.090	0.082	N/A	N/A	350	50-70W	102	B2 U0 G0
22W16LED4K-R-LE2	2359	25	0.210	0.125	0.115	0.105	N/A	N/A	470	50-70W	95	B1 U0 G1
22W16LED4K-R-LE3	2504	25	0.210	0.125	0.115	0.105	N/A	N/A	470	50-70W	101	B1 U0 G1
22W16LED4K-R-LE5	2390	25	0.210	0.125	0.115	0.105	N/A	N/A	470	50-70W	96	B2 U0 G1
24W16LED4K-R-LE2	2511	27	0.225	0.135	0.120	0.110	N/A	N/A	530	70-100W	94	B1 U0 G1
24W16LED4K-R-LE3	2666	27	0.225	0.135	0.120	0.110	N/A	N/A	530	70-100W	100	B1 U0 G1
24W16LED4K-R-LE5	2544	27	0.225	0.135	0.120	0.110	N/A	N/A	530	70-100W	95	B2 U0 G1
30W16LED4K-R-LE2	3075	37	0.290	0.175	0.150	0.135	N/A	N/A	700	70-100W	87	B1 U0 G1
30W16LED4K-R-LE3	3295	37	0.290	0.175	0.150	0.135	N/A	N/A	700	70-100W	92	B1 U0 G1
30W16LED4K-R-LE5	3145	37	0.290	0.175	0.150	0.135	N/A	N/A	700	70-100W	88	B2 U0 G1
32W32LED4K-R-LE2	3618	37	0.300	0.185	0.165	0.155	0.105	0.090	350	70-100W	103	B1 U0 G1
32W32LED4K-R-LE3	3754	37	0.300	0.185	0.165	0.155	0.105	0.090	350	70-100W	107	B1 U0 G1
32W32LED4K-R-LE5	3404	37	0.300	0.185	0.165	0.155	0.105	0.090	350	70-100W	97	B2 U0 G1
48W32LED4K-R-LE2	5309	54	0.450	0.270	0.240	0.215	0.160	0.130	530	70-100W	100	B1 U0 G1
48W32LED4K-R-LE3	5509	54	0.450	0.270	0.240	0.215	0.160	0.130	530	70-100W	104	B1 U0 G1
48W32LED4K-R-LE5	4995	54	0.450	0.270	0.240	0.215	0.160	0.130	530	70-100W	94	B3 U0 G1
60W32LED4K-R-LE2	6619	72	0.595	0.340	0.295	0.265	0.210	0.160	700	100-150W	94	B2 U0 G1
60W32LED4K-R-LE3	6924	72	0.595	0.340	0.295	0.265	0.210	0.160	700	100-150W	97	B2 U0 G2
60W32LED4K-R-LE5	6280	72	0.595	0.340	0.295	0.265	0.210	0.160	700	100-150W	89	B3 U0 G1
48W48LED4K-R-LE2	5090	52	0.440	0.260	0.250	0.230	0.160	0.130	350	70-100W	105	B1 U0 G1
48W48LED4K-R-LE3	5224	52	0.440	0.260	0.250	0.230	0.160	0.130	350	70-100W	107	B1 U0 G1
48W48LED4K-R-LE5	5097	52	0.440	0.260	0.250	0.230	0.160	0.130	350	70-100W	105	B3 U0 G1
72W48LED4K-R-LE2	7705	80	0.660	0.390	0.350	0.310	0.225	0.170	530	100-150W	99	B2 U0 G2
72W48LED4K-R-LE3	7909	80	0.660	0.390	0.350	0.310	0.225	0.170	530	100-150W	101	B2 U0 G2
72W48LED4K-R-LE5	7717	80	0.660	0.390	0.350	0.310	0.225	0.170	530	100-150W	99	B3 U0 G2
90W48LED4K-R-LE2	9854	107	0.890	0.515	0.455	0.390	0.305	0.225	700	150-175W	95	B2 U0 G2
90W48LED4K-R-LE3	10113	107	0.890	0.515	0.455	0.390	0.305	0.225	700	150-175W	98	B2 U0 G2
90W48LED4K-R-LE5	9868	107	0.890	0.515	0.455	0.390	0.305	0.225	700	150-175W	95	B4 U0 G4
140W48LED4K-T-LE2	14556	160	1.330	0.760	0.665	0.575	N/A	N/A	1050	200-250W	94	B3-U0-G2
140W48LED4K-T-LE3	15200	160	1.330	0.760	0.665	0.575	N/A	N/A	1050	200-250W	98	B3-U0-G2
140W48LED4K-T-LE5	14880	160	1.330	0.760	0.665	0.575	N/A	N/A	1050	200-250W	96	B4-U0-G2

<sup>1</sup> L70 = 100,000 hrs (at ambient temperature = 25°C and forward current = 700 mA)  
<sup>2</sup> System wattage includes the lamp and the LED driver.  
<sup>3</sup> Equivalence should always be confirmed by a photometric layout

Note : Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Philips.





JOB NAME: SPRINGFIELD PARK AND RIDE  
 APEX LIGHTING SOLUTIONS  
 WORKPLAN/CALC PLAN: @ FINSHRD GRADP  
 MOUNTING HEIGHT: 20.5FT

Qty	Label	Arrangement	LLF	Lumens/Lamp	Description
8	A	SINGLE	0.832	N.A.	LMCFC SVM-32W32LED4K-R-1E3-UNV-DM3-WC10-RC-SF1-PH3-BR / MOUNTED TO LIVEPOLES 403-1-2016
16	B	BACK-BACK	0.832	N.A.	LMCFC SVM-24W16LED4K-R-1E3-UNV-DM3-WC10-RC-SF1-PH3-BR / MOUNTED TO LIVEPOLES 403-2-2026

Calculation Summary						
Label	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcFts	Fc	0.19	2.5	0.0	N.A.	N.A.
BEYOND PARKING LOT	Fc	0.06	2.3	0.0	N.A.	N.A.
WITHIN PARKING LOT	Fc	0.91	2.5	0.2	4.55	12.50

**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.



**PROJECT TITLE:**  
 SPRINGFIELD PARK AND RIDE  
 SPRINGFIELD, VT

**DRAWING TITLE:**  
 SITE PHOTOMETRIC CALCULATION

**SCALE:** 1"=20'-0"  
**DATE:** 2/18/15  
**DRAWN BY:** RR  
**SHEET:**

**SL-1**



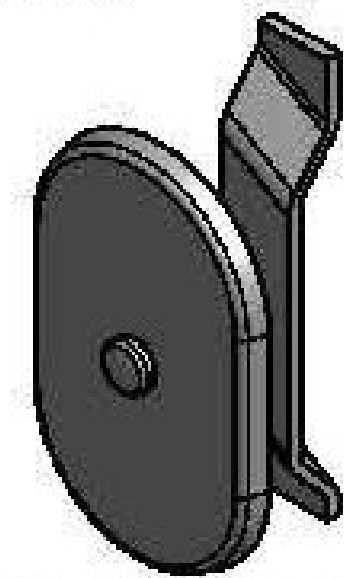
1200 Elm Street  
 Unit 412  
 Manchester, NH 03101

Phone: 877-886-2843  
 Fax: 877-886-2844

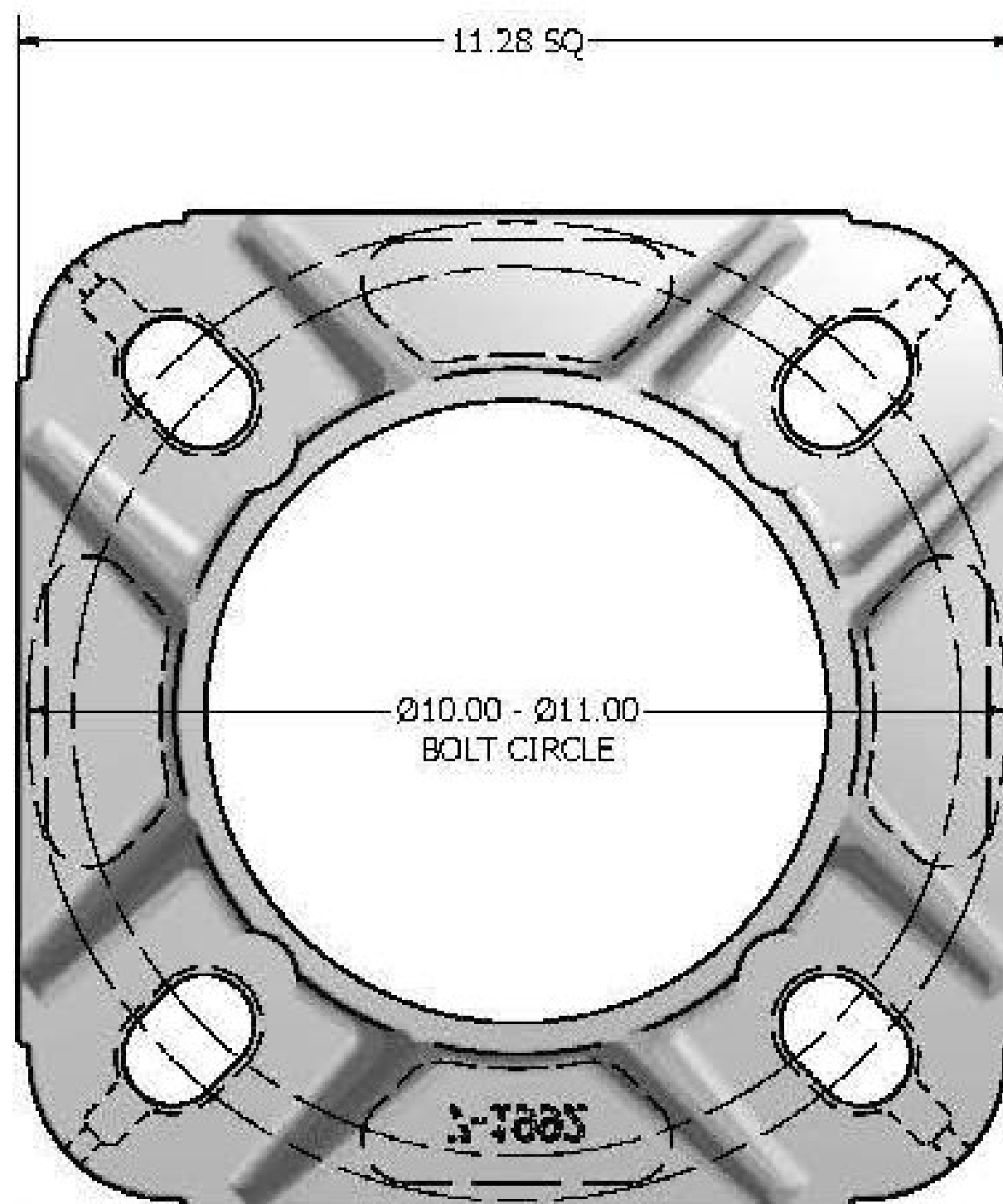
To: GRANITE CITY - BENNINGTON VT 14 MORSE ROAD BENNINGTON, VT 05201		<b>Submittal</b>
Attn: MARK TIMMERMAN		
		Source Quote: SPFLDPRKAN Entry Date: 3/24/2015 Project: SPRINGFIELD PARK AND RIDE
Original Submittal for Approval 1 Copy of Submittals is Attached		
Type	Mfg	Description
A	Philips Lumec	SVM-32W32LED4K-R-LE3-UNIV-DMG-WC-10-RC-SP-1-PH8-BR
A	Lytepoles	405-7015-18-YD-MODTENON-SSAB-IDTAG-CC
A	Lytepoles	405-7015-18-YD-GFI-MODTENON-SSAB-IDTAG-CC
B	Philips Lumec	SVM-24W16LED4K-R-LE3-UNIV-DMG-WC-10-RC-SP-1-PH8-BR
B	Lytepoles	405-7015-18-YD-(2)GFI-(2)MODTENON-SSAB-IDTAG-CC

POLE SHAFT SPECIFICATIONS					
NO.	1. SHAFTS ARE ONE SECTION DESIGN FABRICATED FROM 6063 T6 ALUMINUM EXTRUSION-SPUN TAPERED.				
2.	BASE CASTING IS 356 T6 ALUMINUM. THE SHAFT TELESCOPES INTO THE BASE CASTING AND IS CIRCUMFERENTIALLY WELDED TOP AND BOTTOM.				
3.	ANCHOR BOLTS ARE "L" FORMED RODS HAVING A MINIMUM YIELD STRENGTH OF 55,000 P.S.I. FABRICATED FROM 304 STAINLESS STEEL AND FURNISHED COMPLETE WITH 2 HEX NUTS AND 2 FLAT WASHERS.				
4.	POLES SHALL HAVE A POLYESTER POWDER COAT CUSTOM COLOR (LUMEC BRONZE) FINISH.				
POLE DIMENSIONS					
POLE HGT (FT.)	TOP DIA. (IN.)	BOTTOM DIA. (IN.)	GAGE	MTG. HGT. (FT.)	
18'	4.50	7.00	0.156	20'	
BASE PLATE DIMENSIONS					
BOLT CIRCLE (IN.)	BASE PLATE DIM. (IN.)	BOLT HOLE (IN.)	PLATE THK. (IN.)		
10.00-11.00	11.28 SQ	1.13	1.00		
ANCHOR BOLT DIMENSIONS					
ANCHOR BOLT DIA. (IN.)		ANCHOR BOLT LENGTH (IN.)			
1.00		40.00			
ALLOWABLE WIND LOADING (SQ. FT.)					
WIND*	INDICATED EPA	80 MPH	90 MPH	100 MPH	120 MPH
EPA	-	17.7	13.6	10.8	6.9

\*1994 AASHTO LTS-3 (1.3 GUST FACTOR)

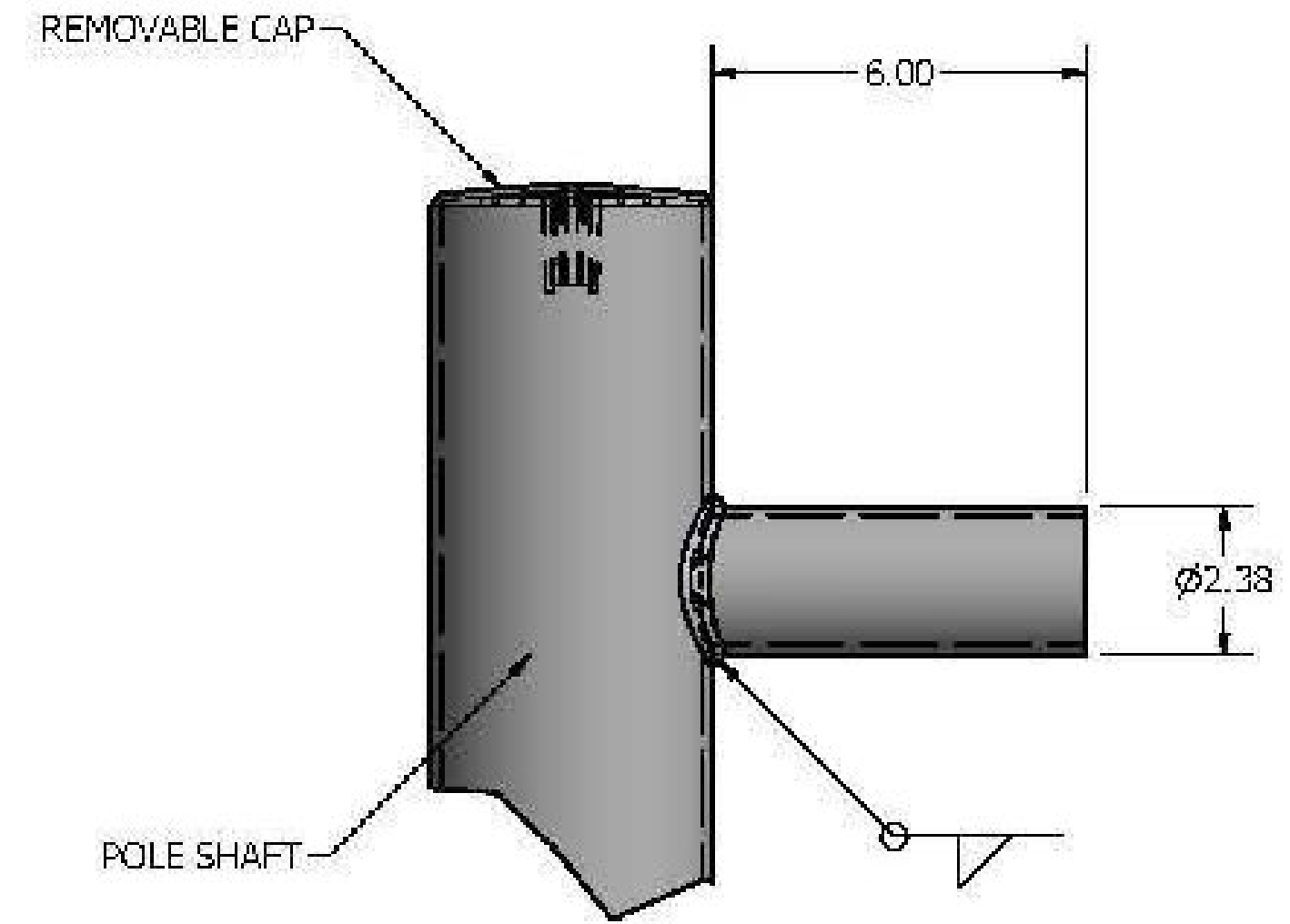


3.00 X 5.00 HAND HOLE COVER

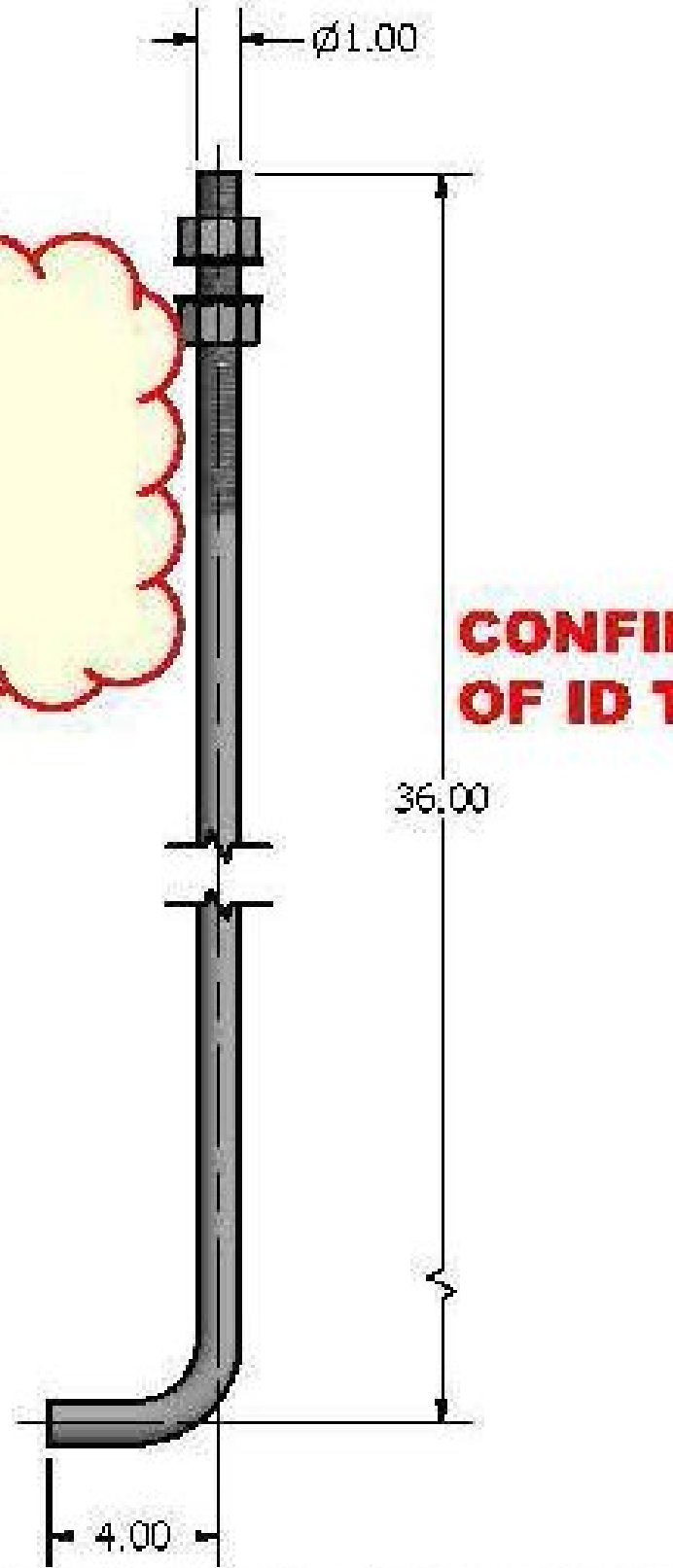


11.28 X 11.28 X 3.38 THK BASE CASTING

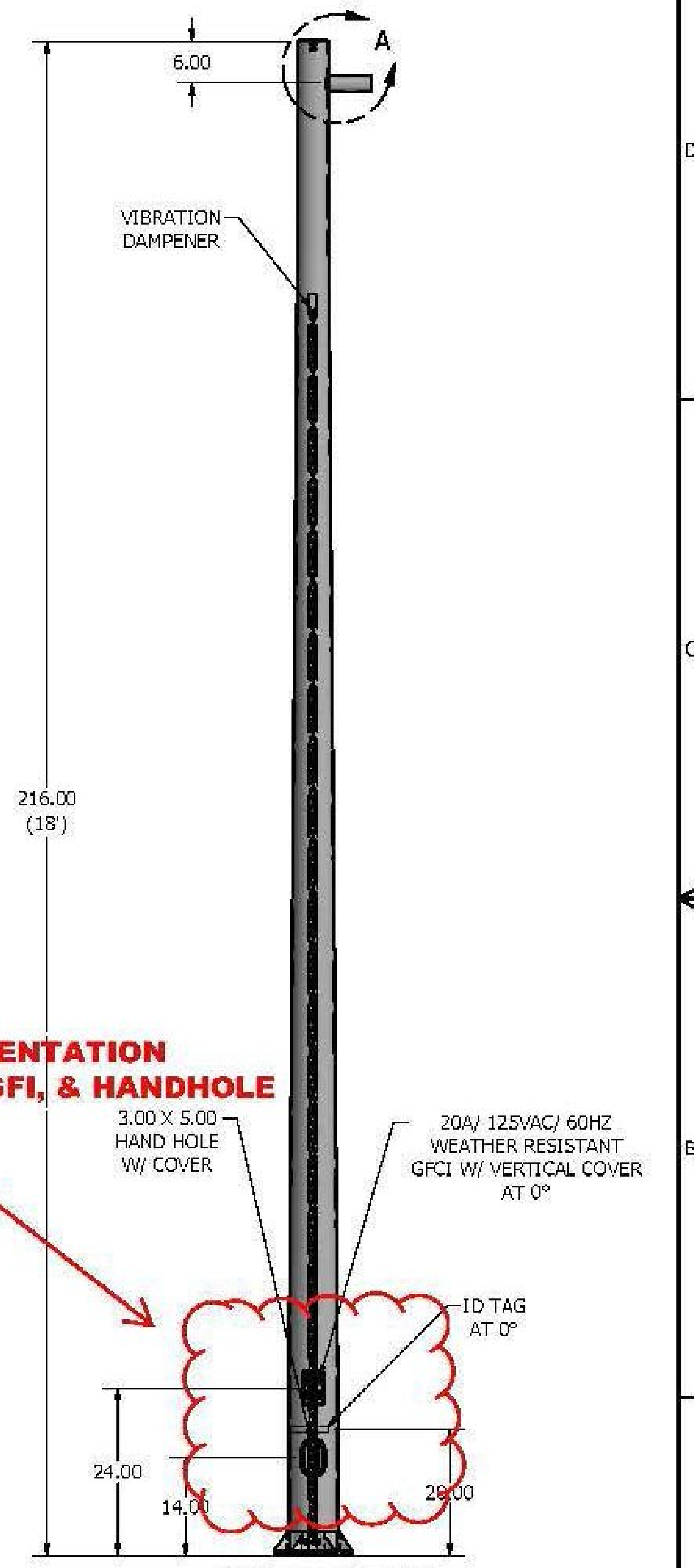
QTY OF (6) ON THE PROJECT  
 TYPES SL9, SL10, SL11, SL12,  
 SL13, SL14



DETAIL A  
 MODTENON DETAIL VIEW



Ø1.00 X 40.00 ANCHOR BOLT  
 (STAINLESS STEEL)



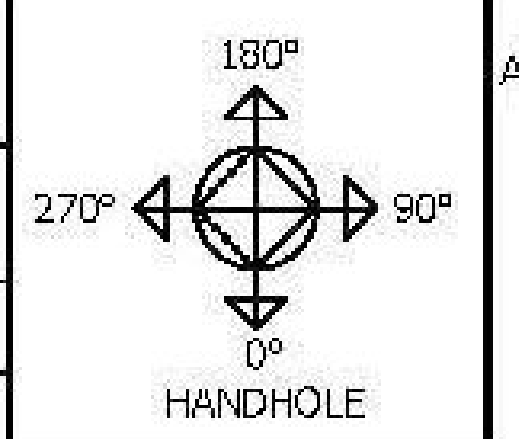
POLE DETAIL

CONFIRM ORIENTATION  
 OF ID TAGS, GFI, & HANDHOLE

lyte poles  
 a DVM company  
 P.O. Box 340  
 Eastpointe, MI 48021  
 P: (586) 771-4610 | F: (586) 771-5527  
 www.lytepoles.com

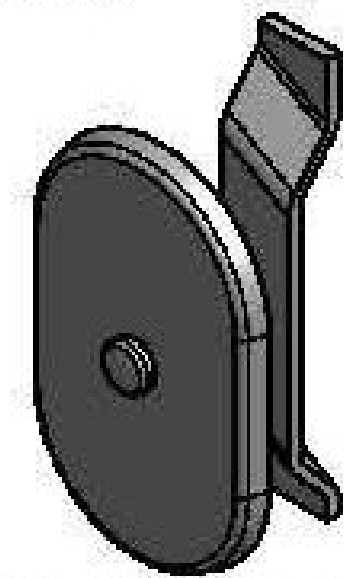
DRAWN:	S. HARVALA	3/24/2015
CHECKED:		
REVISION:		DATE:
APPROVED:		
QUOTE:	1403642	
S.O.#		
REF:		SCALE: NONE

SOME GEOGRAPHICAL AREAS HAVE SPECIAL WIND CONDITIONS THAT CAN CAUSE WIND INDUCED VIBRATIONS CAUSING A FATIGUE PROBLEM. NO METHOD HAS YET BEEN FOUND FOR PREDICTING DESTRUCTIVE LIGHTING POLE VIBRATION. THESE CONDITIONS ARE UNIQUE AND CANNOT BE GUARANTEED AGAINST, AND ARE THE RESPONSIBILITY OF A LOCAL SPECIALIST.		
TITLE: <b>SPRINGFIELD, VT PARK &amp; RIDE</b>		
CATALOG: <b>405-7015-18-VD-GFI-MODTENON-SSAB-IDTAG-CC</b>		
DWG NO:	<b>SD-7119</b>	SIZE <b>C</b>
		SHEET 1 OF 1



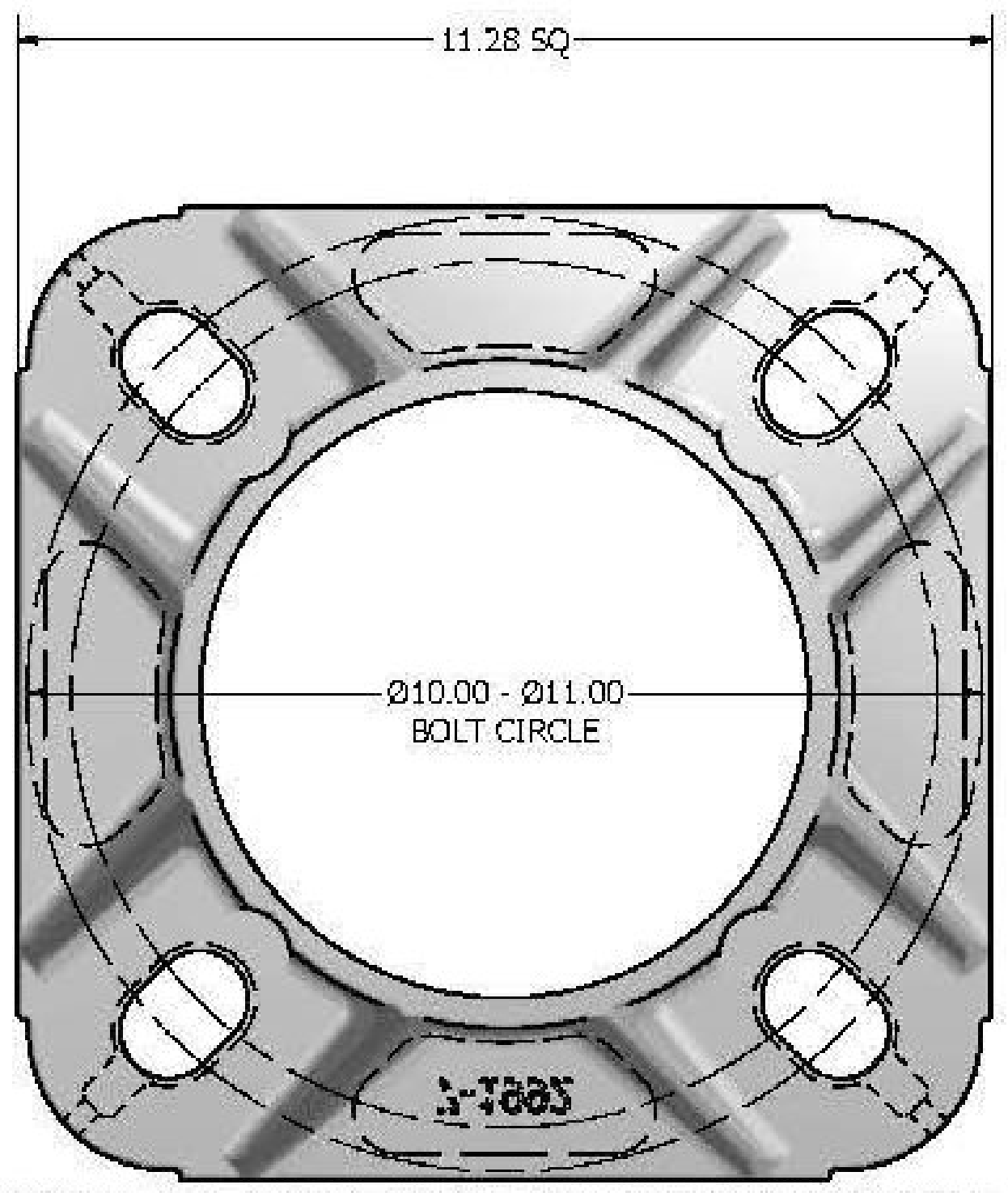
POLE SHAFT SPECIFICATIONS					
NO.	1. SHAFTS ARE ONE SECTION DESIGN FABRICATED FROM 6063 T6 ALUMINUM EXTRUSION-SPUN TAPERED.				
2.	BASE CASTING IS 356 T6 ALUMINUM. THE SHAFT TELESOPES INTO THE BASE CASTING AND IS CIRCUMFERENTIALLY WELDED TOP AND BOTTOM.				
3.	ANCHOR BOLTS ARE "L" FORMED RODS HAVING A MINIMUM YIELD STRENGTH OF 55,000 P.S.I. FABRICATED FROM 304 STAINLESS STEEL AND FURNISHED COMPLETE WITH 2 HEX NUTS AND 2 FLAT WASHERS.				
4.	POLES SHALL HAVE A POLYESTER POWDER COAT CUSTOM COLOR (LUMEC BRONZE) FINISH.				
POLE DIMENSIONS					
POLE HGT. (FT.)	TOP DIA. (IN.)	BOTTOM DIA. (IN.)	GAGE	MTG. HGT. (FT.)	
18'	4.50	7.00	0.156	20'	
BASE PLATE DIMENSIONS					
BOLT CIRCLE (IN.)	BASE PLATE DIM. (IN.)	BOLT HOLE (IN.)	PLATE THK. (IN.)		
10.00-11.00	11.28 SQ	1.13	1.00		
ANCHOR BOLT DIMENSIONS					
ANCHOR BOLT DIA. (IN.)		ANCHOR BOLT LENGTH (IN.)			
1.00		40.00			
ALLOWABLE WIND LOADING (SQ. FT.)					
WIND*	INDICATED EPA	80 MPH	90 MPH	100 MPH	120 MPH
EPA	-	17.7	13.6	10.8	6.9

\*1994 AASHTO LTS-3 (1.3 GUST FACTOR)

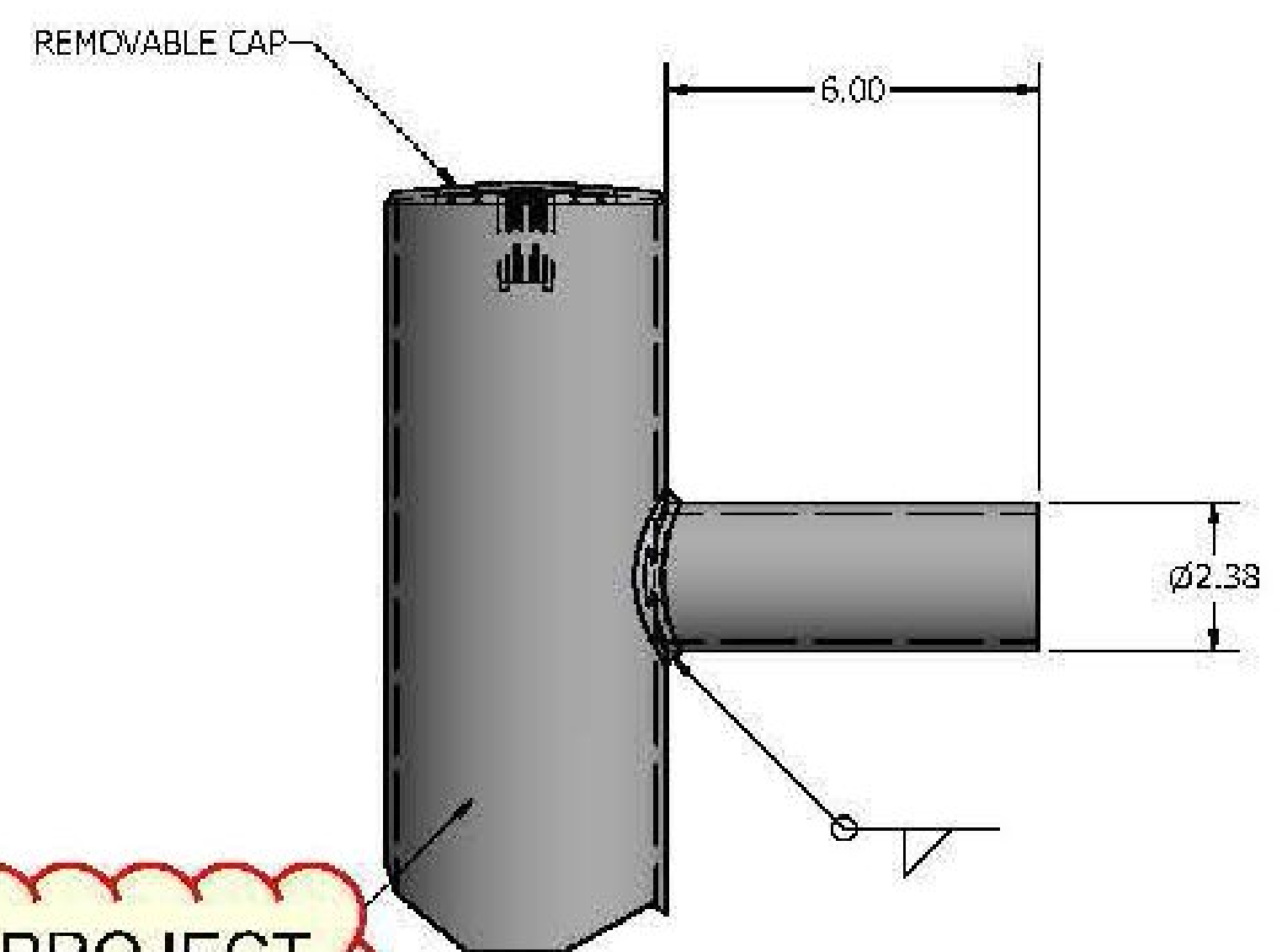


QTY OF (2) ON THE PROJECT  
TYPES SL7 & SL8

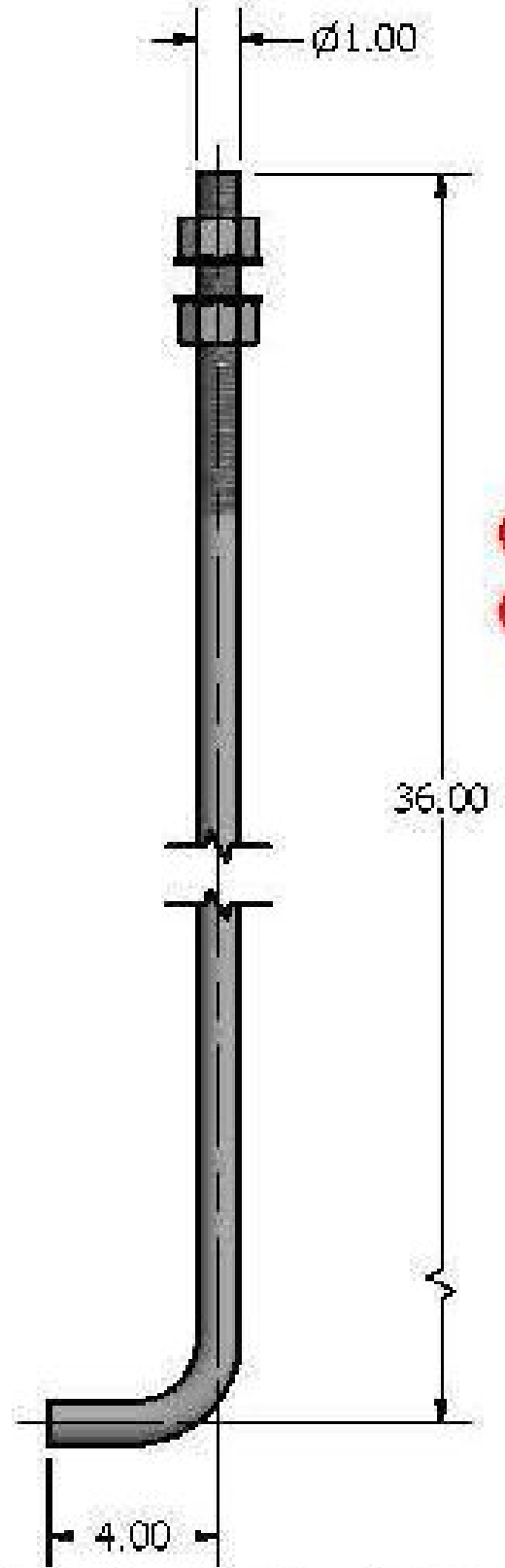
3.00 X 5.00 HAND HOLE COVER



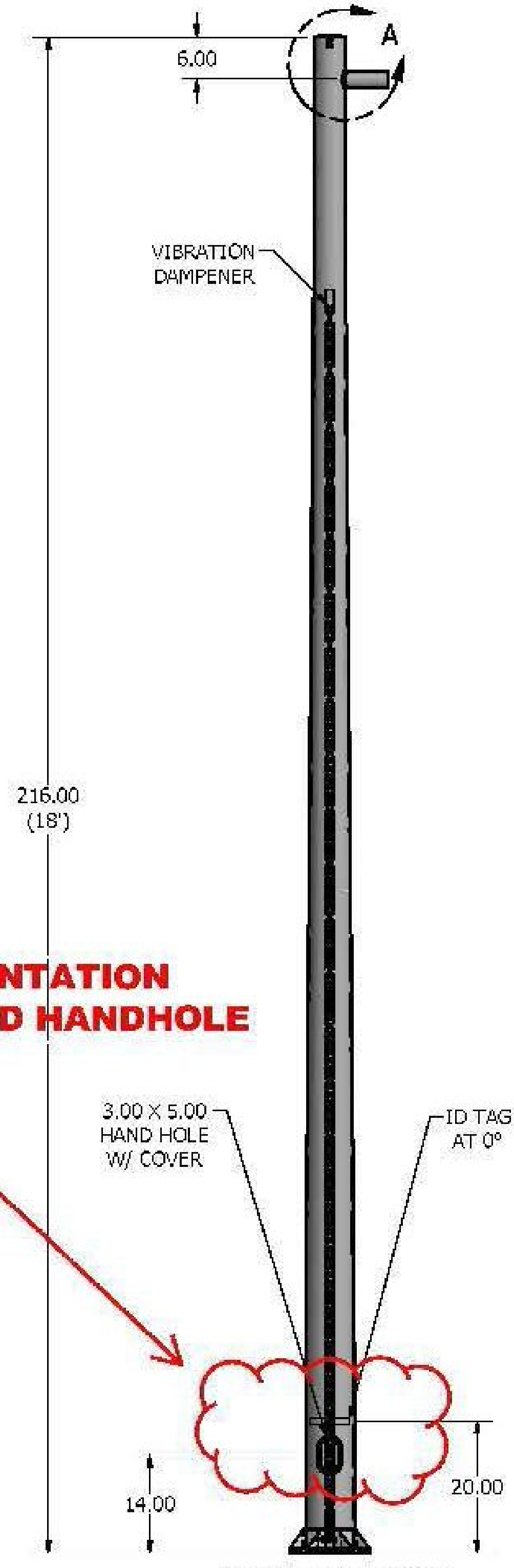
11.28 X 11.28 X 3.38 THK BASE CASTING



DETAIL A  
MODTENON DETAIL VIEW



Ø1.00 X 40.00 ANCHOR BOLT  
(STAINLESS STEEL)



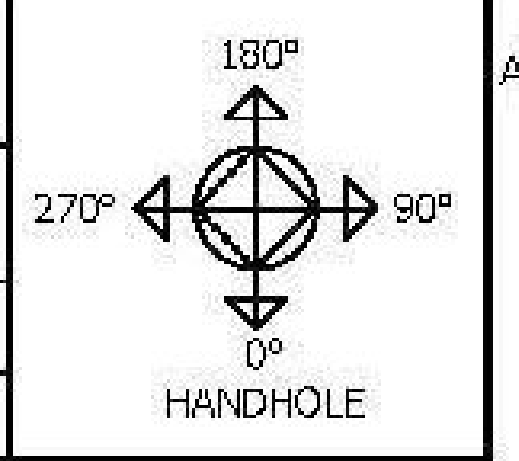
POLE DETAIL

**CONFIRM ORIENTATION OF ID TAGS AND HANDHOLE**

lyte poles  
P.O. Box 340  
Eastpointe, MI 48021  
P: (586) 771-4610 | F: (586) 771-5527  
www.lytepoles.com  
a DVM company

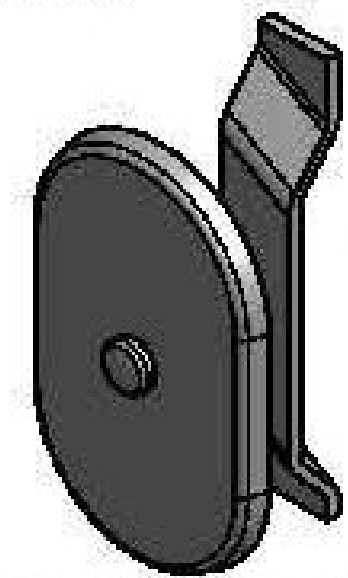
DRAWN:	S. HARVALA	3/24/2015
CHECKED:		
REVISION:		DATE:
APPROVED:		
QUOTE:	1403642	
S.O.#		
REF:	SCALE: NONE	

SOME GEOGRAPHICAL AREAS HAVE SPECIAL WIND CONDITIONS THAT CAN CREATE WIND INDUCED VIBRATIONS CAUSING A FATIGUE PROBLEM. NO METHOD HAS YET BEEN FOUND FOR PREDICTING DESTRUCTIVE LIGHTING POLE VIBRATION. THESE CONDITIONS ARE UNIQUE AND CANNOT BE GUARANTEED AGAINST, AND ARE THE RESPONSIBILITY OF A LOCAL SITE ENGINEER.		
TITLE: <b>SPRINGFIELD, VT PARK &amp; RIDE</b>		
CATALOG: <b>405-7015-18-VD-MODTENON-SSAB-IDTAG-CC</b>		
DWG NO:	<b>SD-7118</b>	SIZE <b>C</b>
		SHEET 1 OF 1

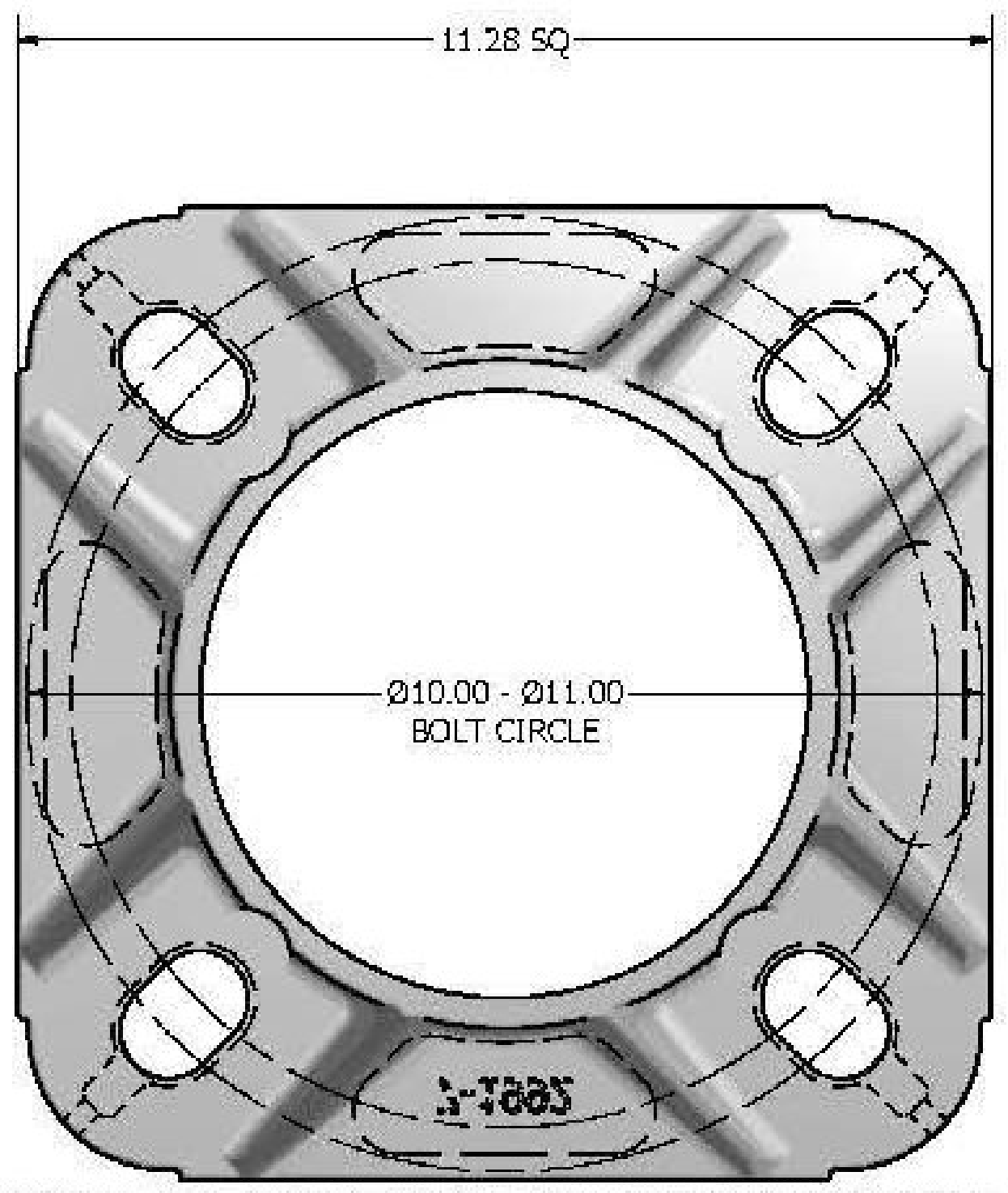


POLE SHAFT SPECIFICATIONS					
1.	SHAFTS ARE ONE SECTION DESIGN FABRICATED FROM 6063 T6 ALUMINUM EXTRUSION-SPUN TAPERED.				
2.	BASE CASTING IS 356 T6 ALUMINUM. THE SHAFT TELESCOPES INTO THE BASE CASTING AND IS CIRCUMFERENTIALLY WELDED TOP AND BOTTOM.				
3.	ANCHOR BOLTS ARE "L" FORMED RODS HAVING A MINIMUM YIELD STRENGTH OF 55,000 P.S.I. FABRICATED FROM 304 STAINLESS STEEL AND FURNISHED COMPLETE WITH 2 HEX NUTS AND 2 FLAT WASHERS.				
4.	POLES SHALL HAVE A POLYESTER POWDER COAT CUSTOM COLOR (LUMEC BRONZE) FINISH.				
POLE DIMENSIONS					
POLE HGT (FT.)	TOP DIA. (IN.)	BOTTOM DIA. (IN.)	GAGE	MTG. HGT. (FT.)	
18'	4.50	7.00	0.156	20'	
BASE PLATE DIMENSIONS					
BOLT CIRCLE (IN.)	BASE PLATE DIM. (IN.)	BOLT HOLE (IN.)	PLATE THK. (IN.)		
10.00-11.00	11.28 SQ	1.13	1.00		
ANCHOR BOLT DIMENSIONS					
ANCHOR BOLT DIA. (IN.)		ANCHOR BOLT LENGTH (IN.)			
1.00		40.00			
ALLOWABLE WIND LOADING (SQ. FT.)					
WIND*	INDICATED EPA	80 MPH	90 MPH	100 MPH	120 MPH
EPA	-	17.7	13.6	10.8	6.9

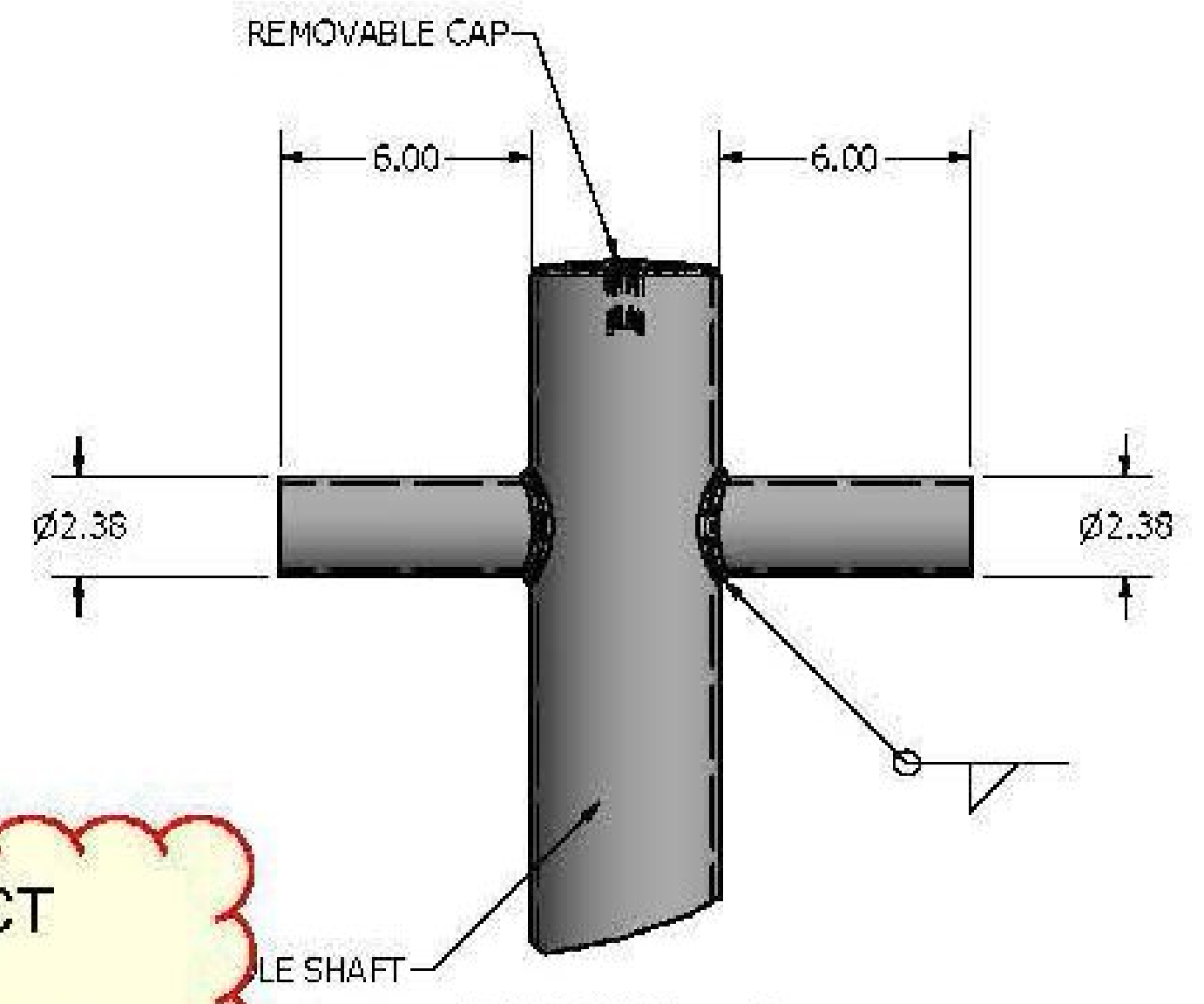
\*1994 AASHTO LTS-3 (1.3 GUST FACTOR)



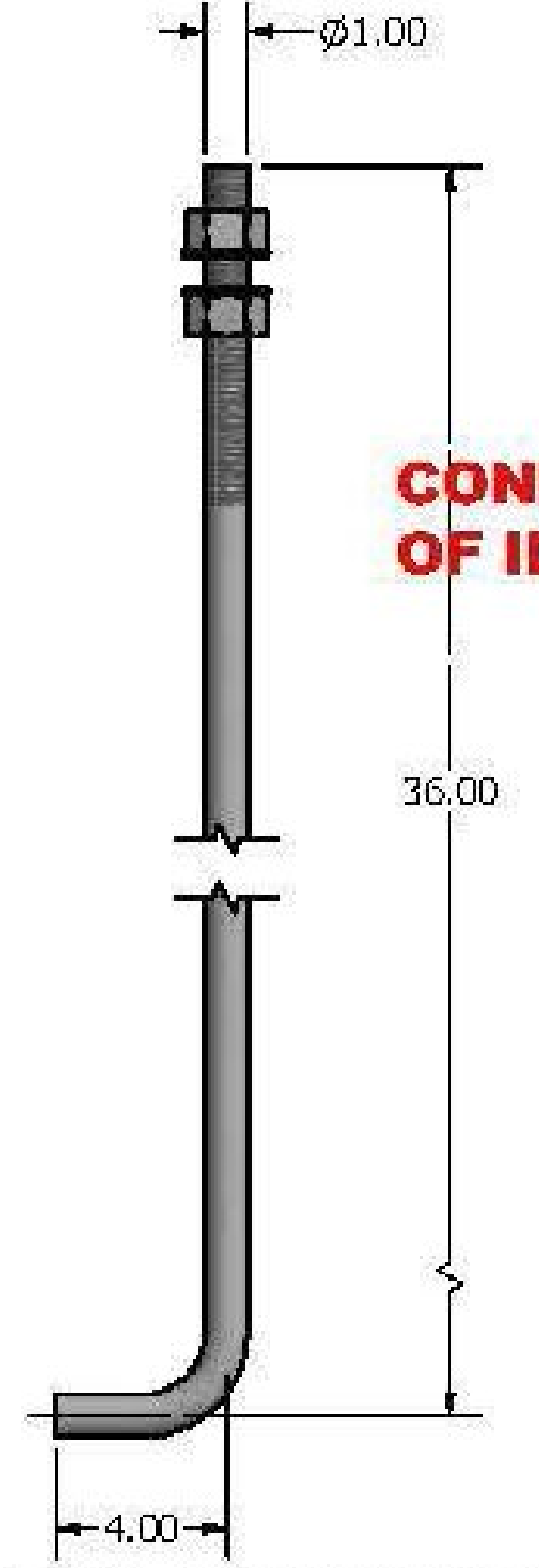
QTY OF (6) ON PROJECT  
 TYPES SL1, SL2, SL3, SL4,  
 SL5, SL6



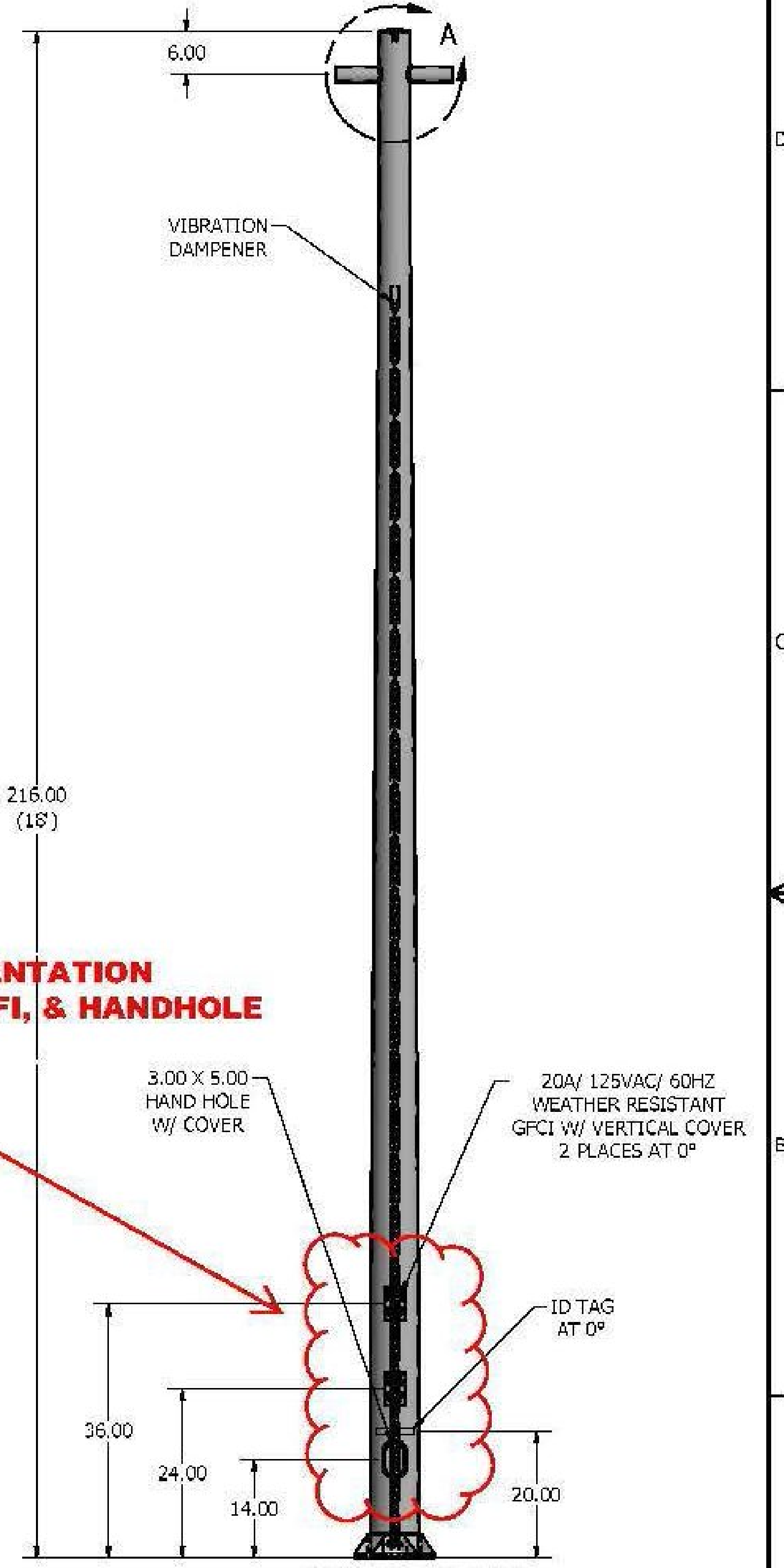
11.28 X 11.28 X 3.38 THK BASE CASTING



DETAIL A  
 (2)MODTENON DETAIL VIEW



Ø1.00 X 40.00 ANCHOR BOLT  
 (STAINLESS STEEL)



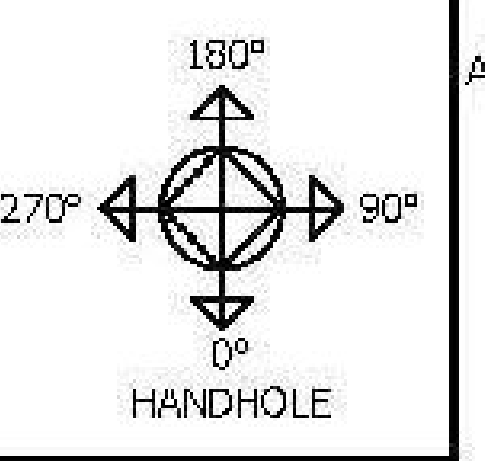
POLE DETAIL

CONFIRM ORIENTATION OF ID TAGS, GFI, & HANDHOLE

lyte poles  
 a DVM company  
 P.O. Box 340  
 Eastpointe, MI 48021  
 P: (586) 771-4610 | F: (586) 771-5527  
 www.lytepoles.com

DRAWN: S. HARVALA	3/24/2015
CHECKED:	
REVISION:	DATE:
APPROVED:	
QUOTE: 1403642	
S.O.#	
REF:	SCALE: NONE

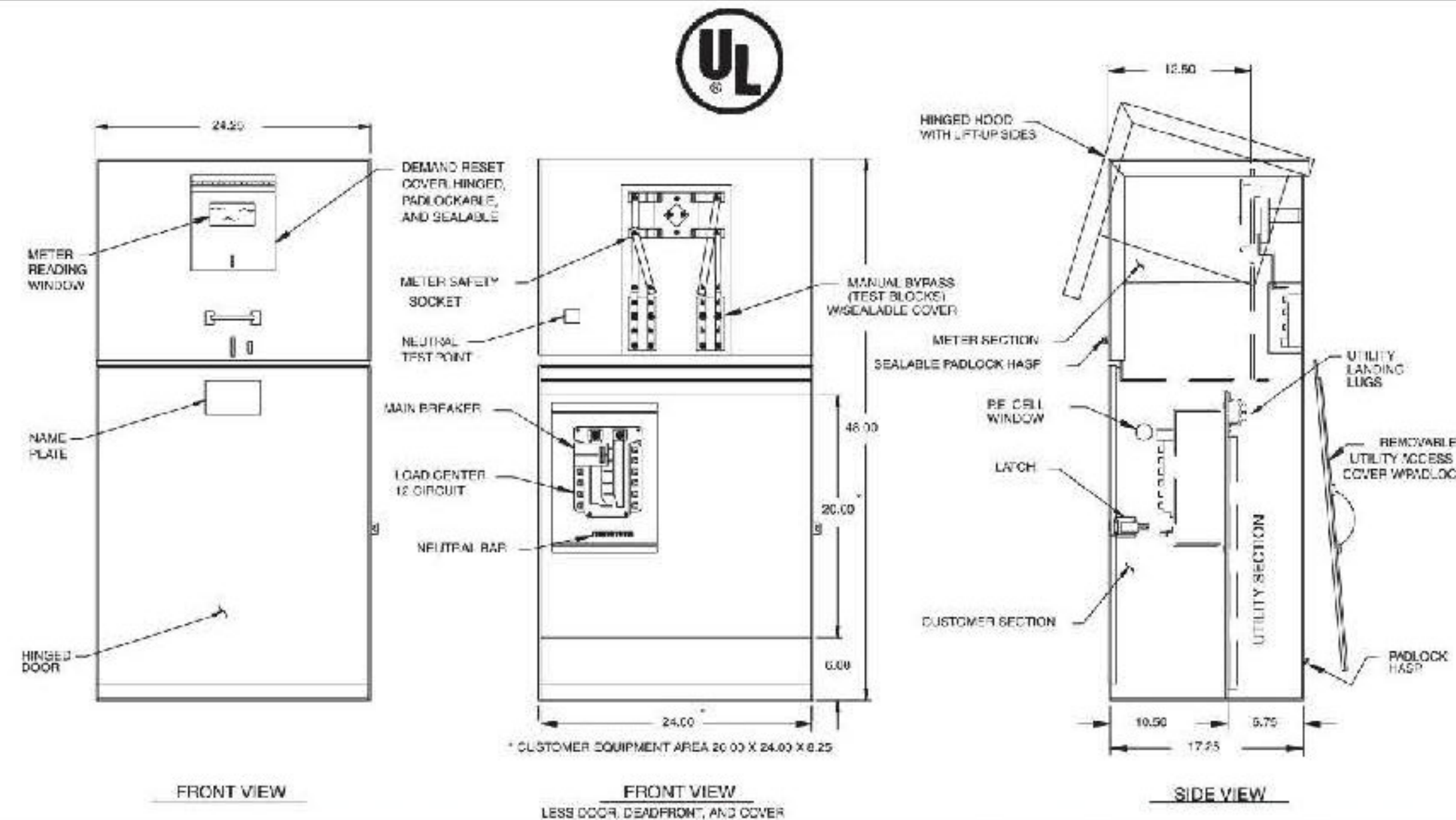
SOME GEOGRAPHICAL AREAS HAVE SPECIAL WIND CONDITIONS THAT CAN CREATE WIND INDUCED VIBRATIONS CAUSING A FATIGUE PROBLEM. NO METHOD HAS YET BEEN FOUND FOR PREDICTING DESTRUCTIVE LIGHTING POLE VIBRATION. THESE CONDITIONS ARE UNIQUE AND CANNOT BE GUARANTEED AGAINST, AND ARE THE RESPONSIBILITY OF A LOCAL STRUCTURAL ENGINEER.		
TITLE: SPRINGFIELD, VT PARK & RIDE		
CATALOG: 405-7015-18-VD-(2)GFI-(2)MODTENON-SSAB-IDTAG-CC		
DWG NO: SD-7120	SIZE C	SHEET 1 OF 1





**MEUG24-S**  
(formerly MEUGLD-S)  
Caltrans Type III-BF

Designed to supply metered power to remote locations.  
Typical applications included parking lot lighting, pump stations, and street lighting.



**STANDARD FEATURES**

- Standard voltage 120/240V 1Ø 3W.
- Meter Socket: 4 jaw, 100 amps or 200 amps.
- Meter socket with test blocks.
- 12 circuit copper bussed interior.
- Main Breaker: 100 amp or 200 amp, 10k AIC
- Utility Landing Lugs: 200 amps, 250 kcmil.
- Utility test section.
- Vandal-resistant side hinged door and dead front.
- Light green powder coat finish in accordance with ASTM B-117.

**OPTIONAL FEATURES**

- Maximum voltage 480Y/277V 3Ø 4W (may affect optional equipment).
- 12 circuit interior may be increased to 30 circuit.
- Higher AIC available upon request.
- P.E. cell, test switch, lighting relay may be added to standard.
- Some equipment modifications available. Consult your factory representative.
- Meter Socket: 5 or 7 jaw, 100 amps or 200 amps.
- Aluminum and stainless steel cabinet
- Uni-body construction available in steel, stainless steel, and aluminum.
- Custom colors available.
- Pad Mounting Base available for concrete foundation. Order separately - MEUG24-BASE.
- Anchor Bolts, 5/8" dia. or 1/2" dia. Order separately (quantity 4).

**SPECIFICATIONS**

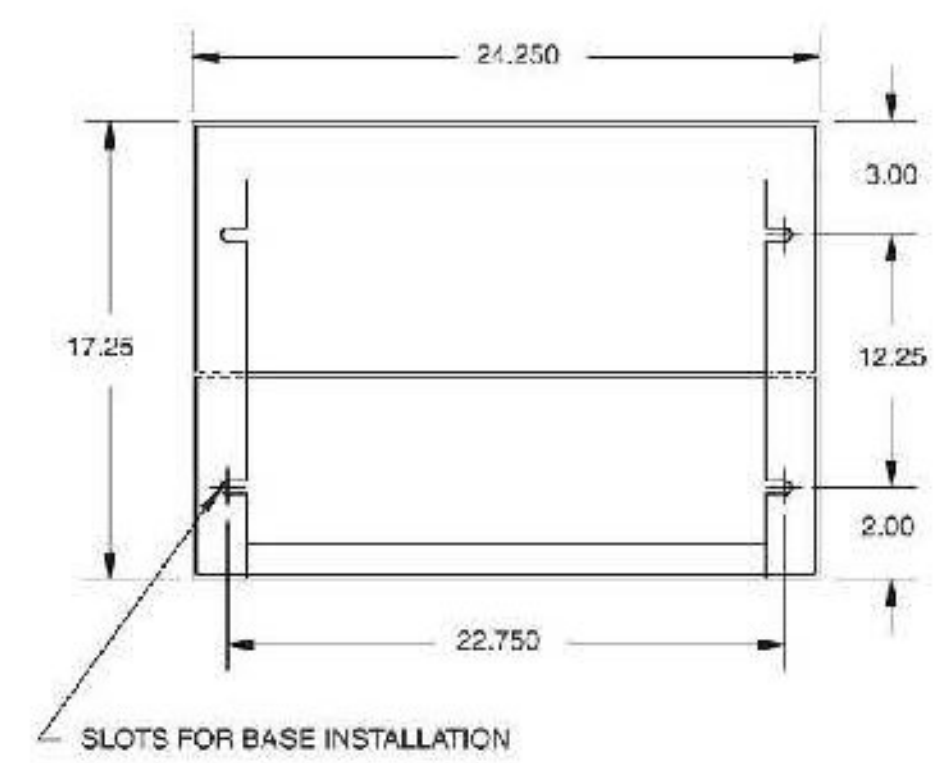
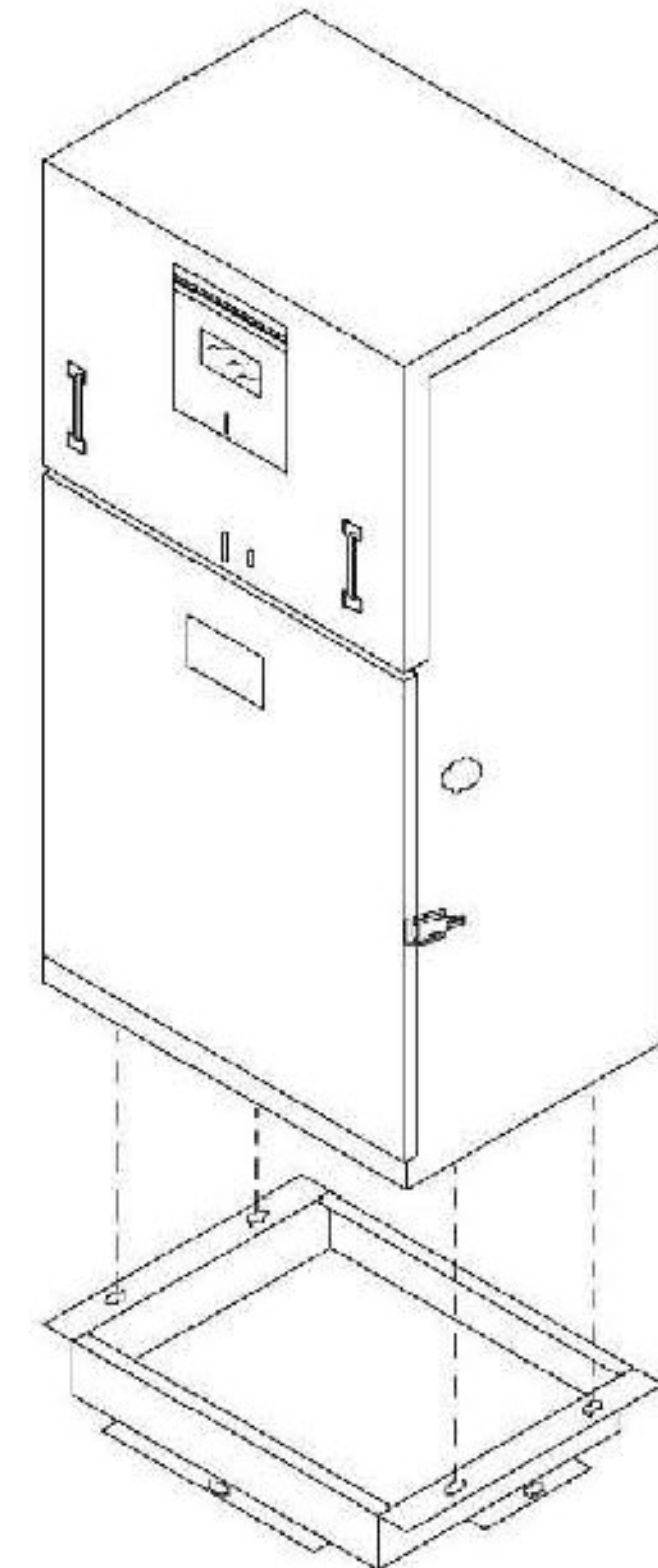
- 12-gauge corrosion-resistant zinc-coated steel construction. Hood and covers 14-gauge.
- Rainproof Type 3R enclosure.
- Complies with Caltrans specification ES-2E.
- Meets EUSERC 308 requirements.
- All factory wiring is 600 volt rated copper.
- Acceptable circuit breakers are GE, ITE, Crouse-Hinds/Murray, Cutler-Hammer.
- Suitable for use without main when no more than six service disconnects are installed and used in accordance with article 384 of the NEC.
- Listed by Underwriters Laboratories, Inc.



**Standard Model**  
 Custom Configurations also available.  
 Consult your factory representative.

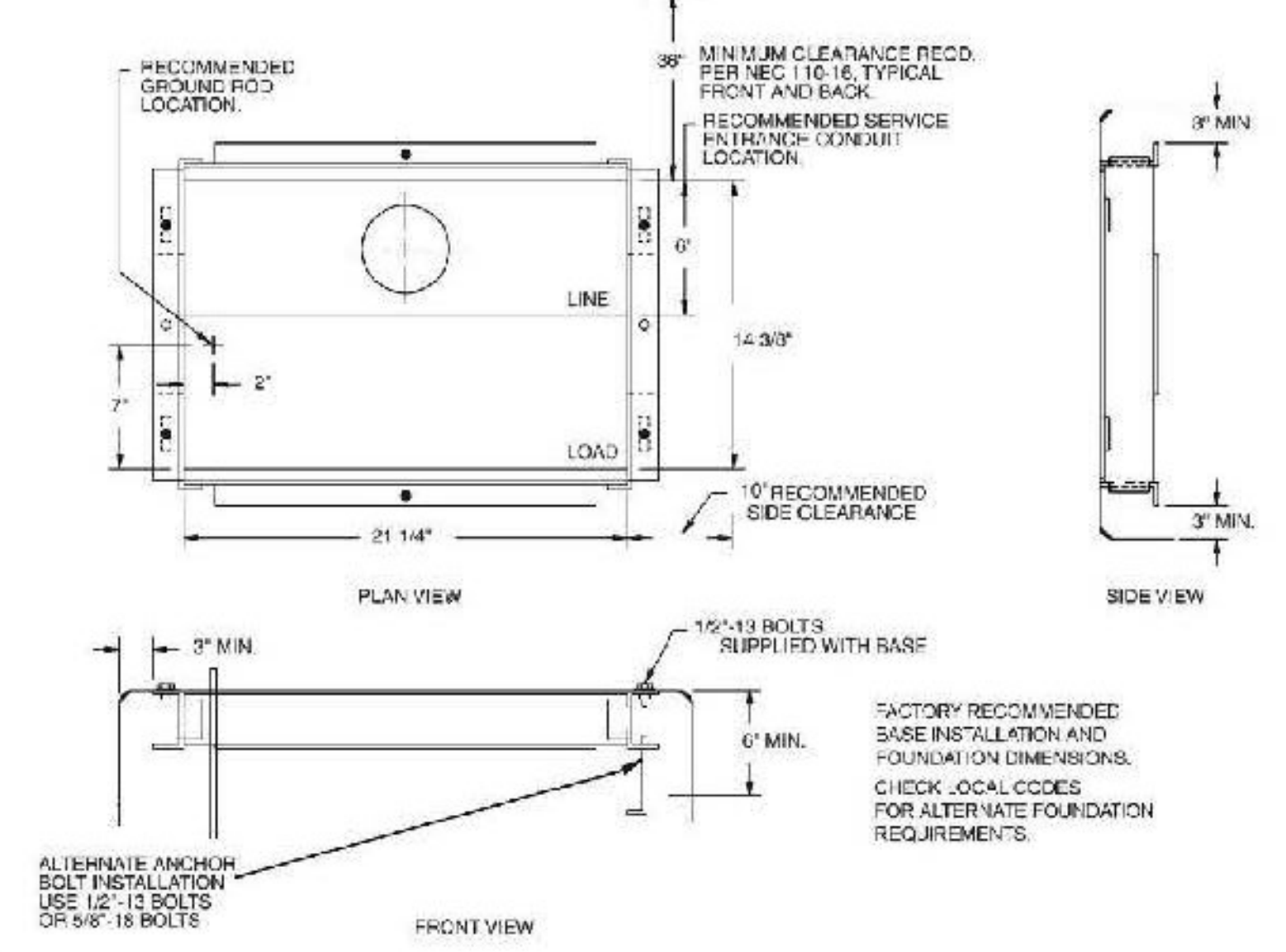
Catalog No.	Amps	Voltage	Main	AIC Rating
MEUG24-S-M100	100	120/240	100A	10,000

For aluminum enclosure, order MEUG24A-  
 For stainless steel enclosure, order MEUG24X-



**BOTTOM VIEW**  
 MOUNTING SLOT DETAIL

**BASE DETAIL**



980 QUAKER HIGHWAY ( 146A ) ■ UXBRIDGE, MA ■ 01569  
 508-278-0446 ■ WWW.MARLIN-CONTROLS.COM

1199-05-06L1