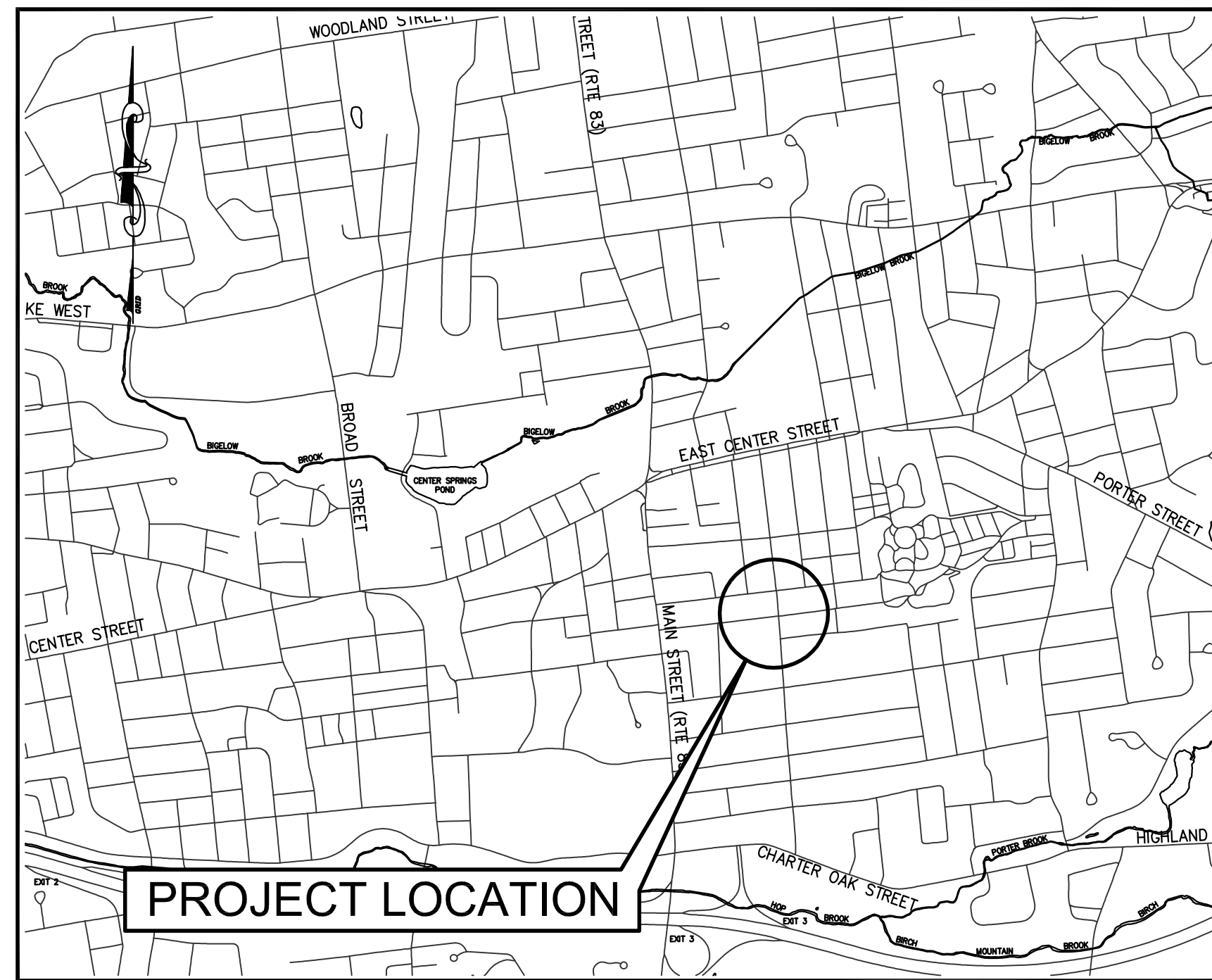


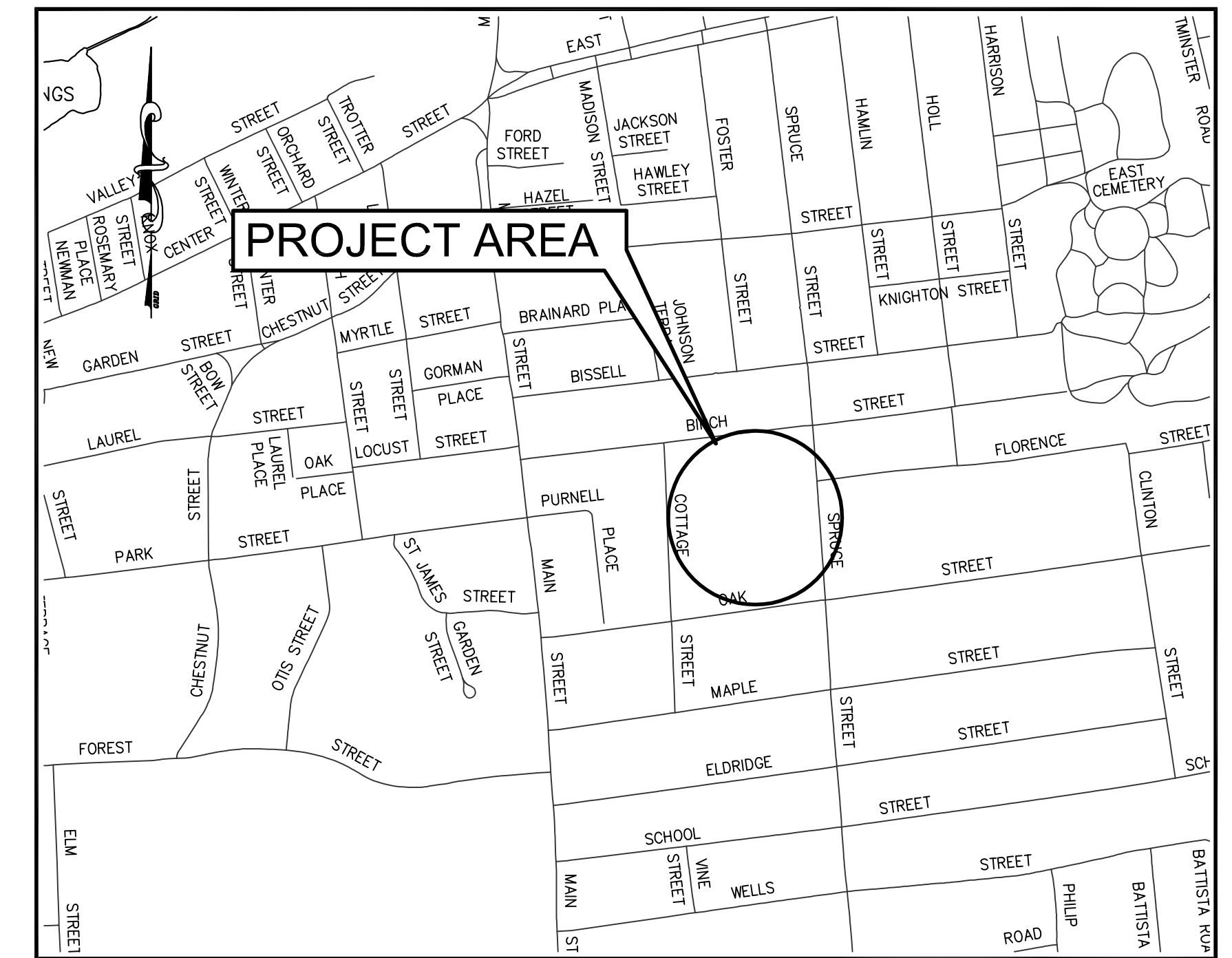
# TOWN OF MANCHESTER

## PUBLIC WORKS DEPARTMENT

### ENGINEERING DIVISION



LOCATION MAP  
1" = 1500'



SITE MAP  
1" = 600'

# STREETSCAPE IMPROVEMENTS

## SPRUCE STREET AT NATHAN HALE SCHOOL

NOVEMBER 2024

REVISED TO 11-27-24 (ADDENDUM NO. 1)

DESIGN STANDARD : TOWN OF MANCHESTER PUBLIC IMPROVEMENT STANDARDS, EFFECTIVE DATE OCTOBER 31, 2020, AS AMENDED

DATUMS : HORIZONTAL DATUM: TOWN OF MANCHESTER CONTROL NETWORK (NAD83 AS ESTABLISHED IN 1998)  
VERTICAL DATUM: TOWN OF MANCHESTER CONTROL NETWORK (NAVD88 USING GEOID 96)

STANDARD SPECIFICATIONS : SEE CONTRACT DOCUMENTS

DESIGN SCALES : PLAN: 1" = 20'  
OTHER SCALES AS NOTED

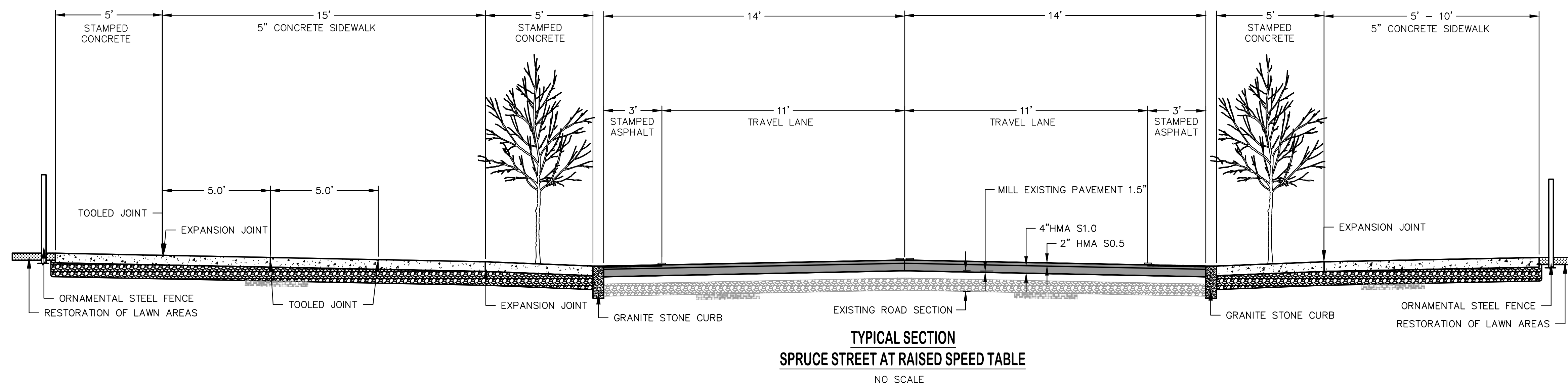
LIST OF DRAWINGS	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	TYPICAL SECTION AND NOTES
3-5	DEMOLITION PLANS
6-8	SITE PLANS
9-10	PAVEMENT MARKING AND SIGNING PLAN
11	POCKET PARK DETAIL PLAN
12	POCKET PARK LANDSCAPING PLAN
13	TRAFFIC PLAN
14-18	ELECTRICAL PLANS
19-22	DETAILS
1 OF 1	ALTERNATE BID NO. 1 BASKETBALL COURT

DESIGNED BY:  
TOWN OF MANCHESTER  
ENGINEERING DIVISION

JEFF LAMALVA  
TOWN ENGINEER  
P.E. NO. 20967



TOWN OF MANCHESTER  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
494 MAIN STREET - P.O. BOX 191  
MANCHESTER, CT 06045-0191



TYPICAL SECTION  
SPRUCE STREET AT RAISED SPEED TABLE  
NO SCALE

LEGEND

—	WETLAND BOUNDARY	☆	LIGHT POLE
—	RETAINING WALL	⊗	CONIFEROUS TREE
—	GRASS WALL	⊗	DECIDUOUS TREE
—	STONE WALL	⊗	SANITARY MANHOLE
—	STOCKPILE FENCE	⊗	DRAINAGE MANHOLE
—	WIRE FENCE	⊗	CATCH BASIN
—	CHAIN LINK FENCE	⊗	CULVERT END
—	PROPERTY LINE	⊗	HYDRANT
—	RAILROAD TRACKS	⊗	CURB STOP
—	SILT FENCE	⊗	WATER VALVE
—	CONCRETE MONUMENT	⊗	BUTTERFLY VALVE
—	GRANITE MONUMENT	⊗	BLOW OFF
—	IRON PIPE	⊗	SIGN
—	IRON ROD	⊗	DOUBLE POST SIGN
—	CONTROL POINT	⊗	MAIL BOX
—	DRILL HOLE	⊗	BOLLARD
—	UTILITY POLE	⊗	CONTROLLER CABINET
—	UTILITY POLE WITH LIGHT	⊗	GAS GATE
—	TRAFFIC SPAN POLE	⊗	TELEPHONE BOX
—	ELECTRIC BOX	⊗	CATV TUBE
—	WETLAND FLAG		

PROJECT NUMBER  
2023111

FILENAME  
2023111-PLAN.DWG

NO.	DATE	FILE
—	11/08/24	FOR BIDDING
	11/27/24	ADDENDUM NO. 1

DRAWN BY: JL  
CHECKED BY: JL  
RELEASED BY: TB

DRAWING SCALE  
HORIZONTAL: 1" = 20'  
OR AS NOTED  
VERTICAL: 1" = 20'

GRAPHIC SCALE

DATUM  
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION  
**SPRUCE STREET  
MANCHESTER, CT**

PROJECT TITLE  
**STREETScape IMPROVEMENTS  
SPRUCE STREET AT  
NATHAN HALE SCHOOL**

SHEET TITLE  
**TYPICAL SECTION  
AND NOTES**

SHEET NUMBER  
**2 of 22**

**NOTES**

- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "MANCHESTER PUBLIC IMPROVEMENT STANDARDS", EFFECTIVE OCTOBER 31, 2020, AS AMENDED AND THE STATE OF CONN. DEPT. OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, FACILITIES AND INCIDENTAL CONSTRUCTION, FORM 818, DATED 2020, INCLUDING ANY SUPPLEMENTS.
- ALL ELEVATIONS ARE BASED ON THE TOWN OF MANCHESTER CONTROL NETWORK.
- IMPLEMENTING WORKER SAFETY AND HEALTH PROTOCOLS THAT ADDRESS COMPLIANCE WITH ALL RULES, LAWS AND REGULATIONS REGARDING SAFETY AND RISK OF EXPOSURE TO PHYSICAL AND CHEMICAL HAZARDS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ALL EMPLOYEES OF THE CONTRACTOR AND SUBCONTRACTORS ARE TO WEAR REFLECTIVE VESTS AND HARD HATS AT ALL TIMES WHEN ON THE PROJECT SITE.
- A PRECONSTRUCTION MEETING WITH TOWN STAFF IS REQUIRED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL PHASE CONSTRUCTION OPERATIONS TO MINIMIZE THE SIZE OF DISTURBED AREAS AND PERIOD OF TIME THESE AREAS ARE LEFT UNSTABILIZED AND SUBJECT TO EROSION. THIS INCLUDES, BUT IS NOT LIMITED TO, INSTALLATION OF DRAINAGE SYSTEMS DURING THE EARLY STAGES OF CONSTRUCTION AND LIMITING LENGTHS OF RECLAMATION AND FULL-DEPTH ROAD RECONSTRUCTION AREAS TO ALSO LESSEN IMPACTS TO VEHICLE AND PEDESTRIAN TRAVEL THROUGH THE PROJECT AREA.
- THE CONTRACTOR SHALL TAKE CARE NOT TO DISTURB EXISTING MONUMENTATION THAT MAY BE PRESENT NEAR THE PROJECT AREA.
- THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL REQUIRED PERMITS AND PAY ASSOCIATED FEES PRIOR TO ANY CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL CONFINE ALL OPERATIONS AND ACTIVITIES FOR CONSTRUCTION PURPOSES WITHIN THE STREET LINE AND LIMITS OF EASEMENTS UNLESS SHOWN OTHERWISE ON THE PLANS.
- THE CONTRACTOR SHALL RESTORE TWO LANES OF TRAFFIC ON SPRUCE STREET AT THE END OF EACH WORK DAY. IT IS ANTICIPATED THAT THE ROAD WILL REMAIN OPEN AT ALL TIMES WITH ALTERNATING ONE LANE TRAFFIC DURING CONSTRUCTION.
- THE CONTRACTOR SHALL COMMIT SUFFICIENT RESOURCES TO THE PROJECT TO ENSURE THE PROJECT IS COMPLETED WITHIN THE ALLOTTED CONTRACT TIME. ONCE MOBILIZED, THE CONTRACTOR SHALL WORK CONTINUOUSLY ON THE PROJECT UNTIL COMPLETION. ANY UNAUTHORIZED VACATING OF THE JOBSITE IS SUBJECT TO PENALTIES DESCRIBED UNDER THE "LIQUIDATED DAMAGES" SECTION OF THE CONTRACT SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT STORE CONSTRUCTION EQUIPMENT OR MATERIALS WITHIN THE PUBLIC RIGHT-OF-WAY.
- CONSTRUCTION ENTRANCES ARE NOT SHOWN ON THE PLAN; HOWEVER, THEY SHALL BE INSTALLED WHERE DIRECTED BY THE ENGINEER DURING CONSTRUCTION FOR EGRESS FROM TEMPORARY STOCKPILE AREAS. THE PROPOSED LOCATION OF STOCKPILE AREAS SHALL BE IDENTIFIED BY THE CONTRACTOR.
- NO WORK SHALL COMMENCE UNTIL ALL CONSTRUCTION AREA SIGNS ARE IN PLACE.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY ACCESS TO ALL DRIVEWAYS AT ALL TIMES.
- ALL GRASSED AREAS DISTURBED BY THE CONTRACTOR SHALL BE REPLACED WITH TOPSOIL, FERTILIZED AND SEEDS AS PER THE SPECIFICATIONS. CONTRACTOR SHALL MAKE ALL EFFORTS TO MINIMIZE THE LIMITS OF DISTURBANCE AND ASSOCIATED RESTORATION THAT IS REQUIRED.
- ANY DRIVEWAYS, SIDEWALKS, CURB AND LAWN AREAS LOCATED ON PRIVATE PROPERTY OR WITHIN THE RIGHT-OF-WAY THAT ARE IMPACTED DURING CONSTRUCTION SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS AS IDENTIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE REQUIRED LIMITS OF SUCH RESTORATION SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. RESTORATION ON PRIVATE PROPERTY SHALL BE COMPLETED AS PROMPTLY AS PRACTICAL WITHIN THIRTY (30) CALENDAR DAYS OF COMPLETING WORK ON THE PROPERTY.
- ALL SEDIMENT CONTROL SYSTEMS SHALL MEET THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" AS PREPARED BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION, LATEST REVISION. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE AND REPAIR OF EROSION CONTROLS REQUIRED FOR THE PROJECT. ADDITIONAL EROSION CONTROLS SHALL BE INSTALLED BY THE CONTRACTOR FOR TEMPORARY STOCKPILING OF EXCAVATED MATERIAL AND WHERE DEEMED NECESSARY BY THE ENGINEER. EROSION CONTROLS SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL THE SITE IS STABILIZED AND THE ENGINEER APPROVES THEIR REMOVAL.
- SILT SACKS SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASINS WITHIN THE PROJECT AREA AND WHERE DIRECTED BY THE ENGINEER. SILT SACKS SHALL BE THE APPROPRIATE TYPE FOR CATCH BASINS WITH AND WITHOUT CURB INLETS.
- HORIZONTAL AND VERTICAL LOCATIONS OF PROPOSED WORK MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS WITH THE APPROVAL OF THE ENGINEER.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IF CONDITIONS ENCOUNTERED IN THE FIELD ARE DIFFERENT THAN INFORMATION SHOWN ON THE PLANS.
- THE EXISTENCE OF UTILITIES AND APPURTENANCES AS SHOWN ON THESE DRAWINGS ARE FOR REFERENCE ONLY. THE EXACT SIZE, LOCATION, TYPE, AND ELEVATION OF ALL UTILITIES WITHIN ALL WORK AREAS SHALL BE THOROUGHLY INVESTIGATED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "CALL-BEFORE-YOU-DIG" AT 1-800-922-4455 AND MUST HAVE ALL UTILITIES MARKED ON THE GROUND PRIOR TO THE START OF CONSTRUCTION.
- THE QUANTITIES AS INDICATED IN THE CONTRACT DOCUMENTS ARE APPROXIMATE AND MAY NOT INDICATE THE ACTUAL QUANTITIES OF WORK REQUIRED. THE CONTRACTOR MUST VERIFY ALL QUANTITIES.
- SURPLUS EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL DISPOSE OF SURPLUS EXCAVATED MATERIAL IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS.
- PROPOSED STRUCTURE FRAME ELEVATIONS IDENTIFIED ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL SET FRAME ELEVATIONS AS REQUIRED BASED ON EXISTING FEATURES AND GRADES IN THE VICINITY AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY HANDLING OF ALL STORMWATER RUNOFF DURING CONSTRUCTION. METHODS OF HANDLING RUNOFF SHALL BE APPROVED BY THE ENGINEER.
- AT THE END OF EACH WORKING DAY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING NEW DRAINAGE SYSTEMS TO EXISTING. ALL DRAINAGE SYSTEMS WITHIN THE CONSTRUCTION LIMITS SHALL BE MAINTAINED BY THE CONTRACTOR.
- FOR CONNECTIONS TO EXISTING DRAINAGE STRUCTURES, THE CONTRACTOR SHALL VERIFY THE EXISTING STRUCTURE INVERTS, NOTIFY THE ENGINEER IF A DISCREPANCY EXISTS, AND ADJUST THE PIPE SLOPES AS DIRECTED.
- ANY CORING OR OTHER MODIFICATIONS TO EXISTING STRUCTURES REQUIRED FOR CONNECTING NEW PIPES SHALL BE INCLUDED IN THE LINEAR FOOT COST FOR THE ASSOCIATED PIPE INSTALLATION.
- ALL SIDEWALKS, DRIVEWAY APRONS AND SIDEWALK RAMPS SHALL BE CONSTRUCTED TO PROVIDE HANDICAPPED ACCESSIBILITY IN ACCORDANCE WITH THE CONNECTICUT BUILDING CODE.
- ALL CONCRETE SIDEWALK RAMPS SHALL BE INSTALLED WITH DETECTABLE WARNING TILES.
- WHERE DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PROVIDE SLEEVES FOR ALL SIGNS LOCATED WITHIN THE LIMITS OF PROPOSED CONCRETE SIDEWALK.
- FOR SIDEWALKS AND RAMPS, A CLEARANCE OF 48" (36" MINIMUM) MUST BE PROVIDED BETWEEN ANY OBSTRUCTION AND THE BACK EDGE OF THE SIDEWALK AND RAMP OR FACE OF CURB.
- FINAL LOCATION OF ALL PROPOSED UNDERGROUND UTILITIES SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
- RECORD DRAWINGS SHALL BE SUBMITTED TO THE ENGINEERING DIVISION UPON COMPLETION OF THE WORK IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROCURING ALL INFORMATION NECESSARY TO GENERATE THE DRAWINGS. A REDLINED PROGRESS SET OF DRAWINGS SHALL BE MAINTAINED DAILY AND BE AVAILABLE TO THE ENGINEER AT ALL TIMES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY TEMPORARY THRUST RESTRAINT THAT IS REQUIRED.



TOWN OF MANCHESTER  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
494 MAIN STREET - P.O. BOX 191  
MANCHESTER, CT 06045-0191

LEGEND


PROJECT NUMBER  
2023111

FILENAME  
2023111-PLAN.DWG

NO.	DATE	FILE
-	11/08/24	FOR BIDDING

DRAWN BY: JL  
CHECKED BY: JL  
RELEASED BY: TB

DRAWING SCALE  
HORIZONTAL: 1" = 20' VERTICAL: ---  
OR AS NOTED  
  
GRAPHIC SCALE

DATUM  
HORIZONTAL: NAD83 VERTICAL: NAVD88

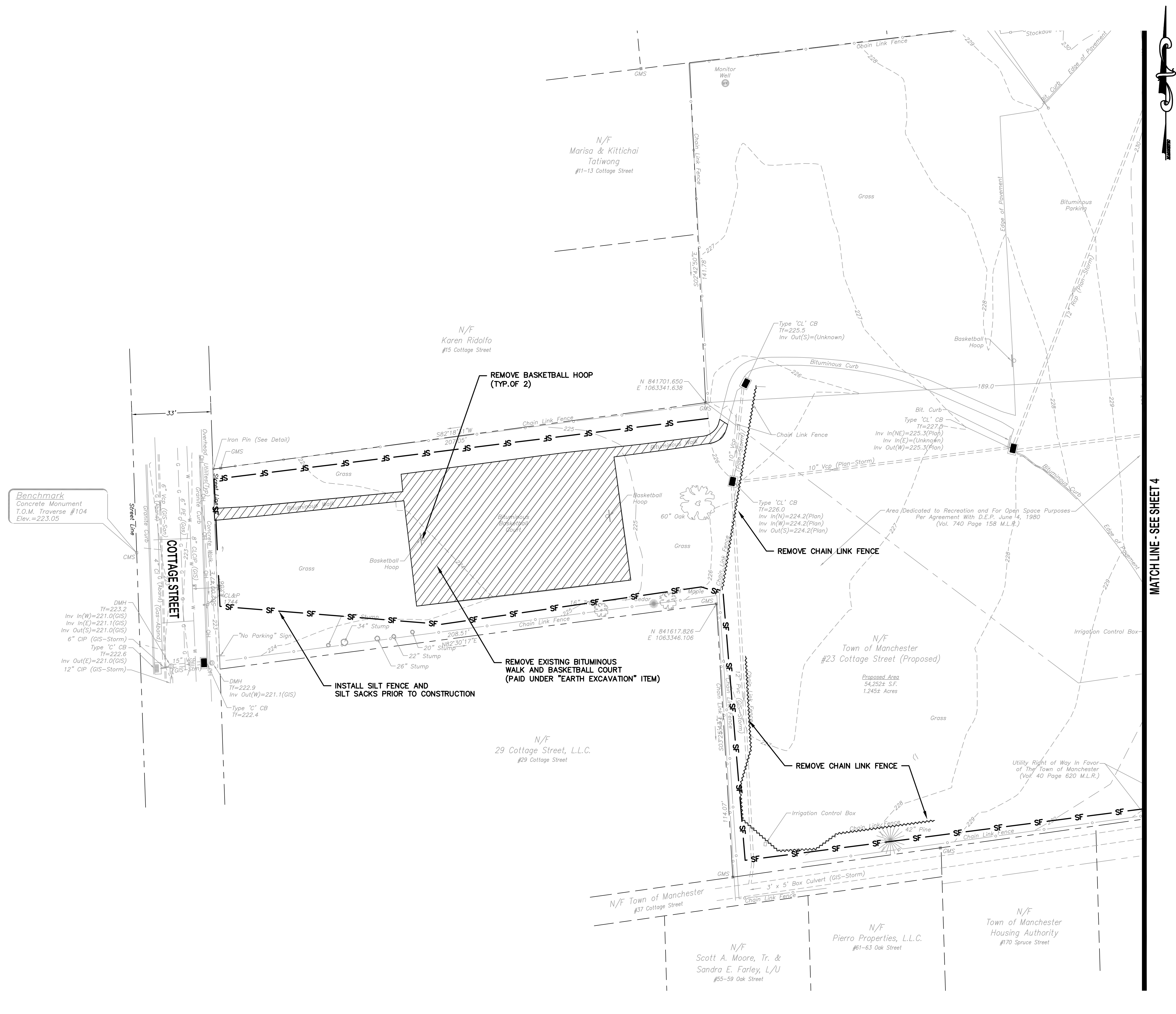
PROJECT LOCATION  
**SPRUCE STREET  
MANCHESTER, CT**

PROJECT TITLE  
**STREETSCAPE IMPROVEMENTS  
SPRUCE STREET AT  
NATHAN HALE SCHOOL**

SHEET TITLE  
**DEMOLITION PLAN**

SHEET NUMBER

**3 of 22**



MATCH LINE - SEE SHEET 4

MATCH LINE - SEE SHEET 5



TOWN OF MANCHESTER PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION 494 MAIN STREET - P.O. BOX 191 MANCHESTER, CT 06045-0191

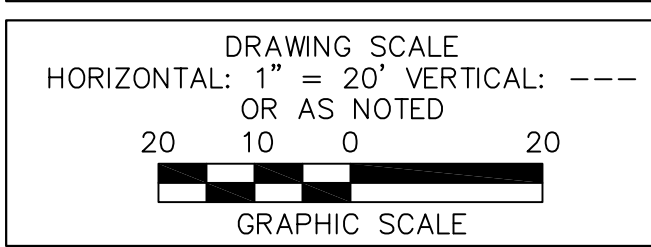
LEGEND table with symbols for various infrastructure items like retaining walls, fences, and utility poles.

PROJECT NUMBER 2023111

FILENAME 2023111-PLAN.DWG

Revision table with columns for NO., DATE, and FILE.

DRAWN BY: JL CHECKED BY: JL RELEASED BY: TB



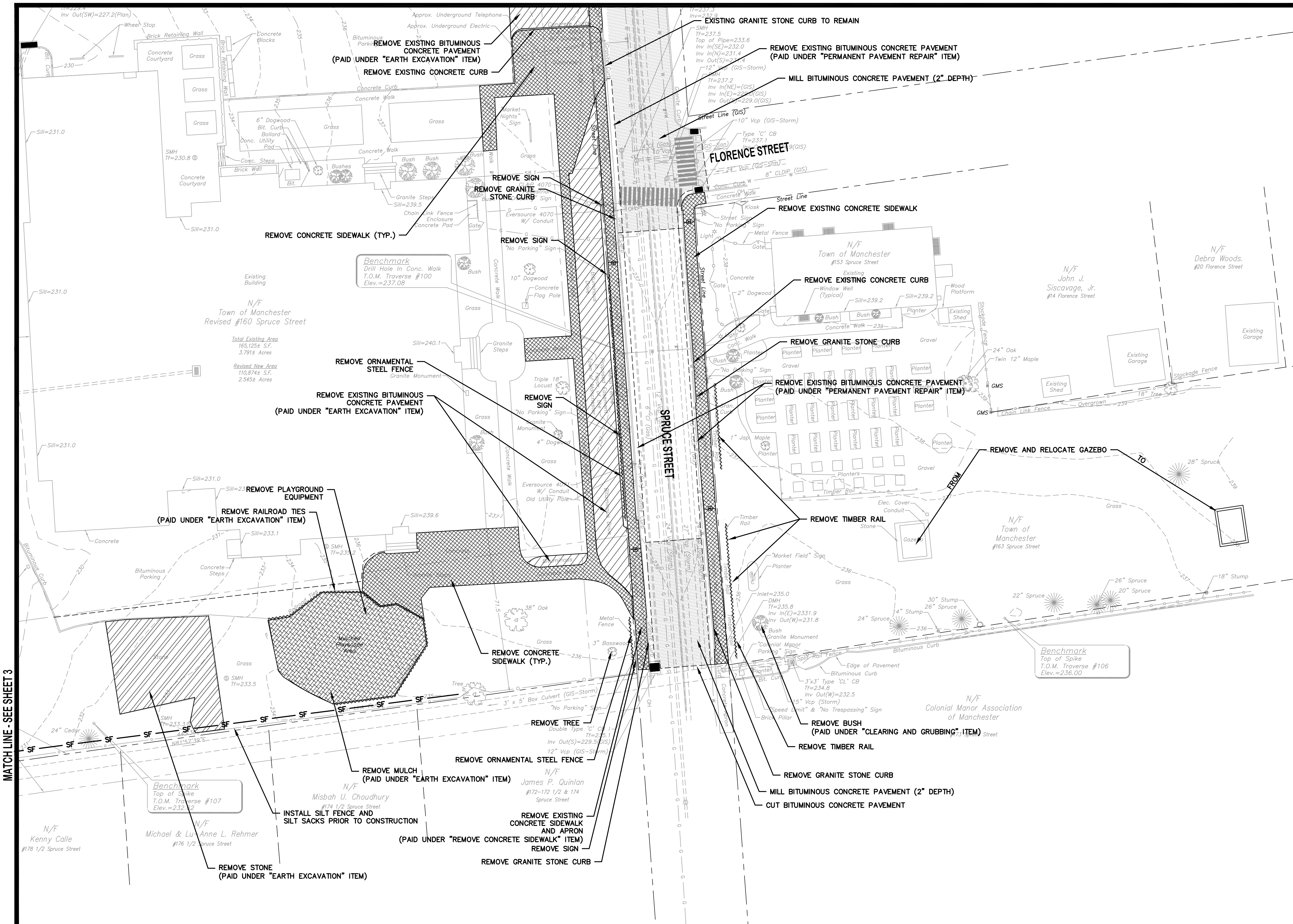
DATUM HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION SPRUCE STREET MANCHESTER, CT

PROJECT TITLE STREETScape IMPROVEMENTS SPRUCE STREET AT NATHAN HALE SCHOOL

SHEET TITLE DEMOLITION PLAN

SHEET NUMBER 4 of 22



MATCH LINE - SEE SHEET 3



TOWN OF MANCHESTER  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
494 MAIN STREET - P.O. BOX 191  
MANCHESTER, CT 06045-0191

LEGEND

	WETLANDS BOUNDARY		LIGHT POLE
	RETAINING WALL		CONIFEROUS TREE
	GUIDE RAIL		DECIDUOUS TREE
	STONE WALL		SANITARY MANHOLE
	STOCKADE FENCE		DRAINAGE MANHOLE
	WIRE FENCE		CATCH BASIN
	CHAIN LINK FENCE		CULVERT END
	PROPERTY LINE		HYDRANT
	SILT FENCE		WATER VALVE
	CONCRETE MONUMENT		CURB STOP
	GRANITE MONUMENT		BUTTERFLY VALVE
	IRON PIPE		BLOW OFF
	IRON ROD		SIGN
	CONTROL POINT		DOUBLE POST SIGN
	DRILLING HOLE		MAIL BOX
	UTILITY POLE		BOLLARD
	UTILITY POLE WITH LIGHT		CONTROLLER CABINET
	ELECTRIC BOX		GAS GATE
	WETLAND FLAG		TELEPHONE BOX
			GATE TUBE

PROJECT NUMBER  
**2023111**

FILENAME  
**2023111-PLAN.DWG**

NO.	DATE	FILE
-	11/08/24	FOR BIDDING

DRAWN BY: JL  
CHECKED BY: JL  
RELEASED BY: TB

DRAWING SCALE  
HORIZONTAL: 1" = 20' VERTICAL: ---  
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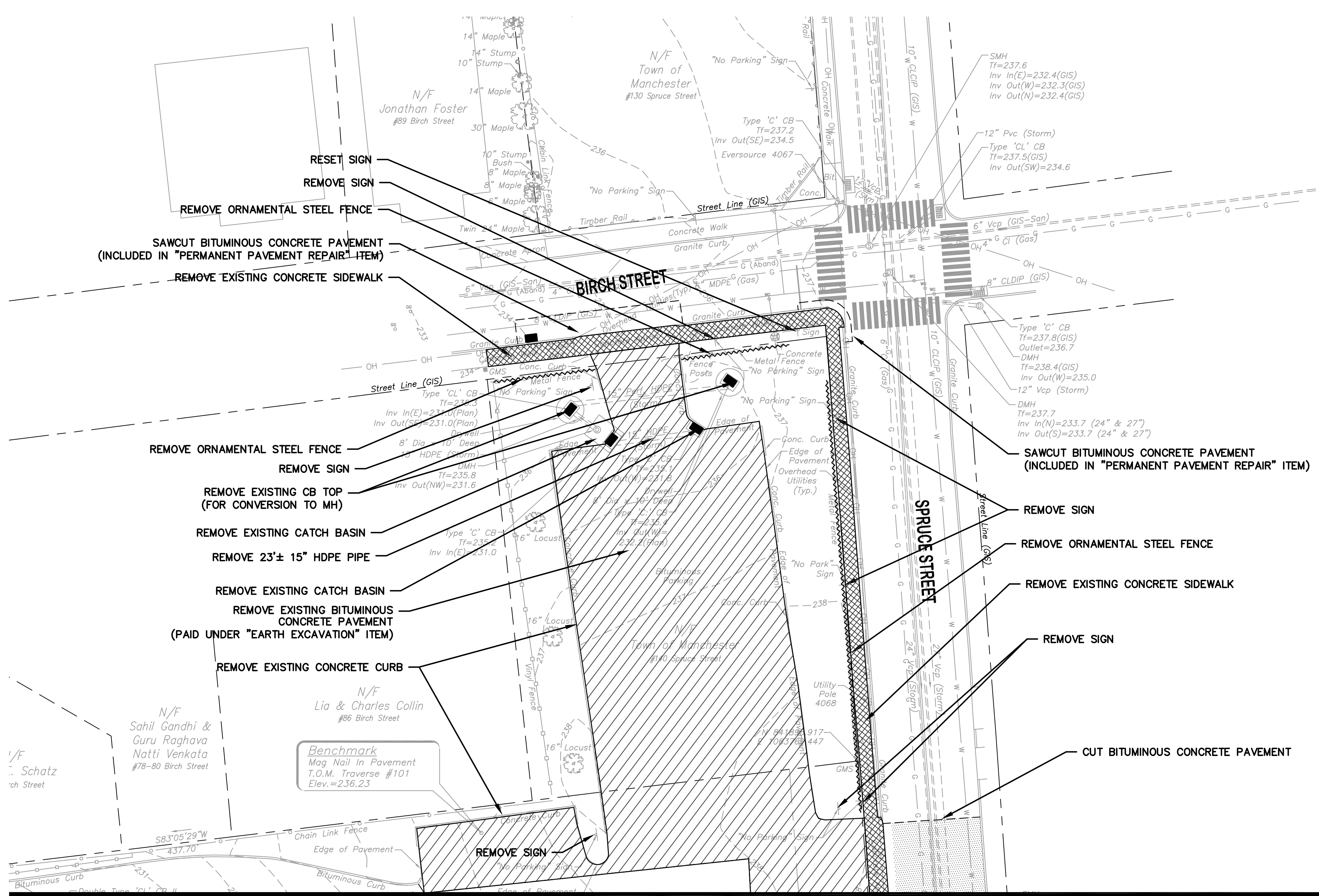
DATUM  
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION  
**SPRUCE STREET  
MANCHESTER, CT**

PROJECT TITLE  
**STREETSCAPE IMPROVEMENTS  
SPRUCE STREET AT  
NATHAN HALE SCHOOL**

SHEET TITLE  
**DEMOLITION PLAN**

SHEET NUMBER  
**5 of 22**



MATCH LINE - SEE SHEET 4



TOWN OF MANCHESTER  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
494 MAIN STREET - P.O. BOX 191  
MANCHESTER, CT 06045-0191

LEGEND

	WETLANDS BOUNDARY		LIGHT POLE
	RETAINING WALL		CONIFEROUS TREE
	STONE WALL		DECIDUOUS TREE
	STOCKADE FENCE		SANITARY MANHOLE
	WIRE FENCE		DRAINAGE MANHOLE
	CHAIN LINK FENCE		CATCH BASIN
	PROPERTY LINE		CULVERT END
	RAILROAD TRACKS		HYDRANT
	SILT FENCE		CURB STOP
	CONCRETE MONUMENT		WATER VALVE
	GRANITE MONUMENT		BUTTERFLY VALVE
	IRON PIPE		BLOW OFF
	IRON ROD		SIGN
	CONTROL POINT		DOUBLE POST SIGN
	DRILL HOLE		MAIL BOX
	UTILITY POLE		BOLLARD
	UTILITY POLE WITH LIGHT		CONTROLLER CABINET
	TRAFFIC SPAN POLE		GAS GATE
	ELECTRIC BOX		TELEPHONE BOX
	WETLAND FLAG		CATV TUBE

PROJECT NUMBER  
2023111

FILENAME  
2023111-PLAN.DWG

NO.	DATE	FILE
-	11/08/24	FOR BIDDING
	11/27/24	ADDENDUM NO. 1

DRAWN BY: J.L.  
CHECKED BY: J.L.  
RELEASED BY: T.B.

DRAWING SCALE  
HORIZONTAL: 1" = 20' VERTICAL: ---  
OR AS NOTED  
20 10 0 20  
GRAPHIC SCALE

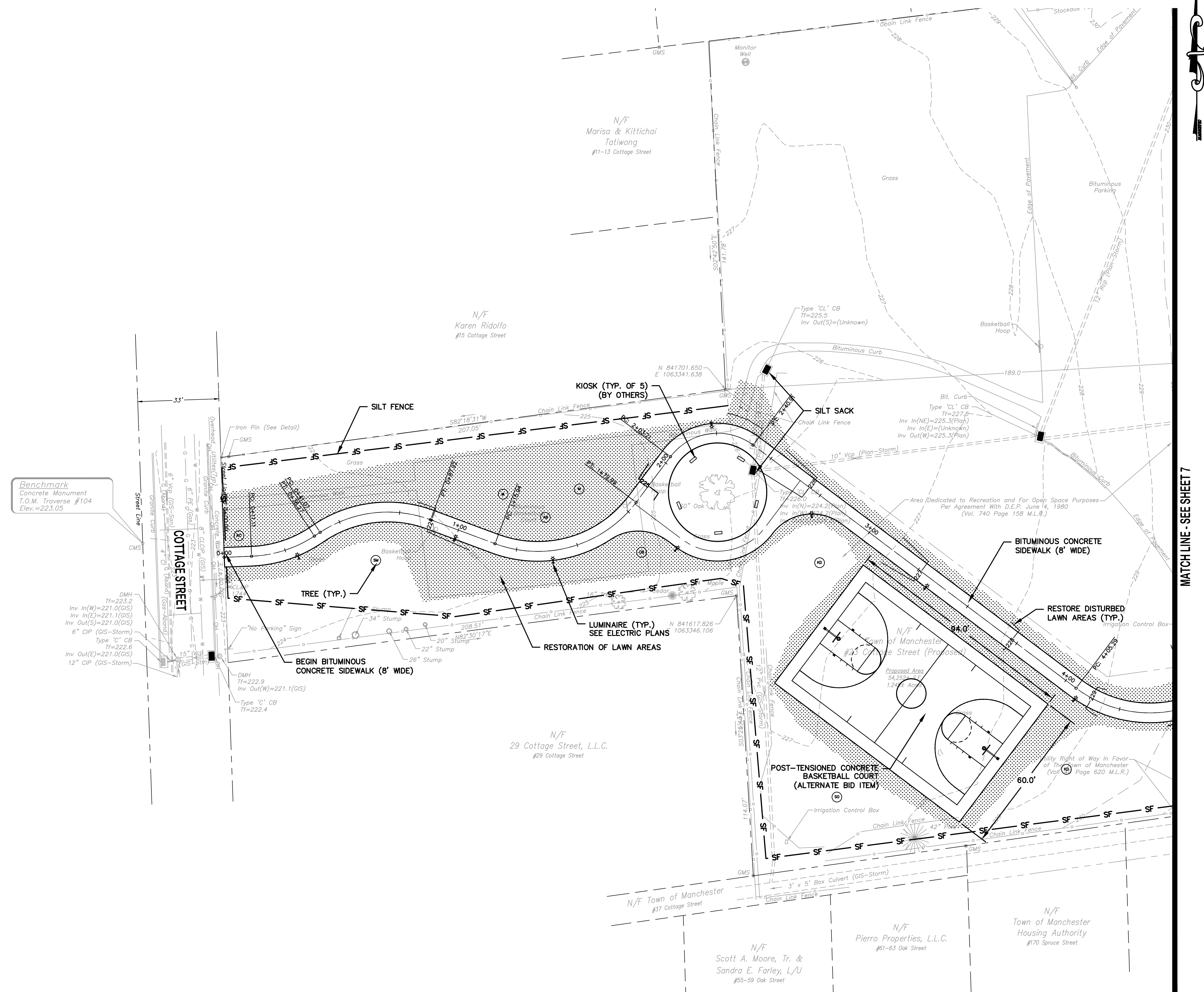
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HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION  
**SPRUCE STREET  
MANCHESTER, CT**

PROJECT TITLE  
**STREETScape IMPROVEMENTS  
SPRUCE STREET AT  
NATHAN HALE SCHOOL**

SHEET TITLE  
**SITE PLAN**

SHEET NUMBER  
**6 of 22**



MATCH LINE - SEE SHEET 7

MATCH LINE - SEE SHEET 8



TOWN OF MANCHESTER  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
494 MAIN STREET - P.O. BOX 191  
MANCHESTER, CT 06045-0191

LEGEND

--- METLAND BOUNDARY	☆ LIGHT POLE
--- RETAINING WALL	⊗ CONIFEROUS TREE
--- GUEE WALL	⊗ DEODOROUS TREE
--- STONE WALL	⊗ SANITARY MANHOLE
--- STOCKAGE FENCE	⊗ DRAINAGE MANHOLE
--- WIRE FENCE	⊗ CATCH BASIN
--- CHAIN LINK FENCE	⊗ CULVERT END
--- PROPERTY LINE	⊗ HYDRANT
--- RAILROAD TRACKS	⊗ CURB STOP
--- SILT FENCE	⊗ WATER VALVE
⊗ CONCRETE MONUMENT	⊗ BUTTERFLY VALVE
⊗ GRANITE MONUMENT	⊗ BLOW OFF
⊗ IRON PIPE	⊗ SIGN
⊗ IRON ROD	⊗ DOUBLE POST SIGN
⊗ CONTROL POINT	⊗ MAIL BOX
⊗ DRILL HOLE	⊗ BOLLARD
⊗ UTILITY POLE	⊗ CONTROLLER CABINET
⊗ UTILITY POLE WITH LIGHT	⊗ GAS GATE
⊗ TRAFFIC SPAN POLE	⊗ TELEPHONE BOX
⊗ ELEC. BOX	⊗ CATV TUBE
⊗ METLAND FLAG	

PROJECT NUMBER  
**2023111**

FILENAME  
**2023111-PLAN.DWG**

NO.	DATE	FILE
11/08/24	FOR BIDDING	
11/27/24	ADDENDUM NO. 1	

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GRAPHIC SCALE

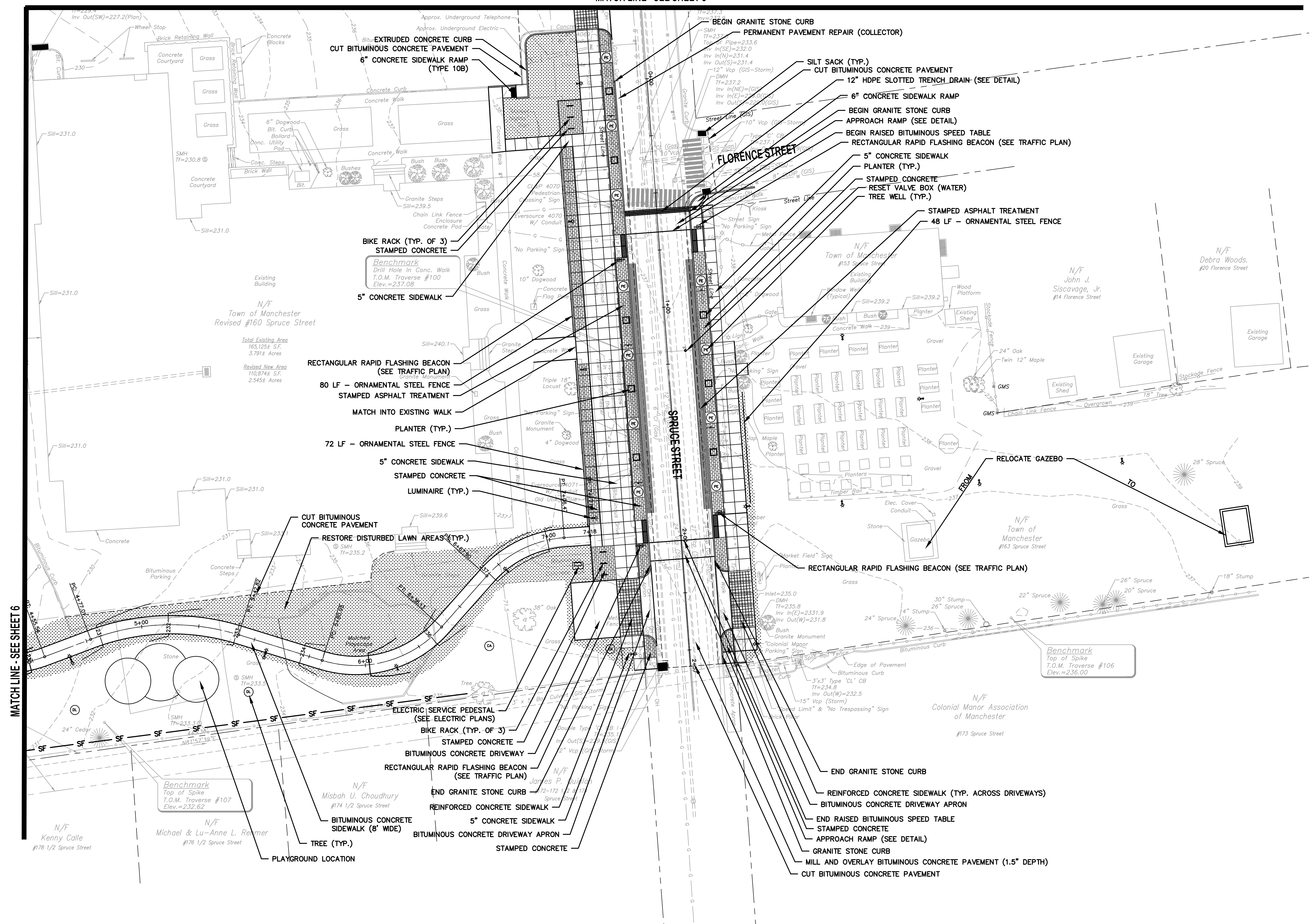
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PROJECT LOCATION  
**SPRUCE STREET  
MANCHESTER, CT**

PROJECT TITLE  
**STREETScape IMPROVEMENTS  
SPRUCE STREET AT  
NATHAN HALE SCHOOL**

SHEET TITLE  
**SITE PLAN**

SHEET NUMBER  
**7 of 22**



MATCH LINE - SEE SHEET 6

- EXTRUDED CONCRETE CURB
- CUT BITUMINOUS CONCRETE PAVEMENT
- 6" CONCRETE SIDEWALK RAMP (TYPE 10B)
- PERMANENT PAVEMENT REPAIR (COLLECTOR)
- SILT SACK (TYP.)
- CUT BITUMINOUS CONCRETE PAVEMENT
- 12" HDPE SLOTTED TRENCH DRAIN (SEE DETAIL)
- 6" CONCRETE SIDEWALK RAMP
- BEGIN GRANITE STONE CURB
- APPROACH RAMP (SEE DETAIL)
- BEGIN RAISED BITUMINOUS SPEED TABLE
- RECTANGULAR RAPID FLASHING BEACON (SEE TRAFFIC PLAN)
- 5" CONCRETE SIDEWALK
- PLANTER (TYP.)
- STAMPED CONCRETE
- RESET VALVE BOX (WATER)
- TREE WELL (TYP.)
- STAMPED ASPHALT TREATMENT
- 48 LF - ORNAMENTAL STEEL FENCE
- BIKE RACK (TYP. OF 3)
- STAMPED CONCRETE
- BENCHMARK  
Drill Hole In Conc. Walk  
T.O.M. Traverse #100  
Elev.=237.08
- 5" CONCRETE SIDEWALK
- RECTANGULAR RAPID FLASHING BEACON (SEE TRAFFIC PLAN)
- 80 LF - ORNAMENTAL STEEL FENCE
- STAMPED ASPHALT TREATMENT
- MATCH INTO EXISTING WALK
- PLANTER (TYP.)
- 72 LF - ORNAMENTAL STEEL FENCE
- 5" CONCRETE SIDEWALK
- STAMPED CONCRETE
- LUMINAIRE (TYP.)
- CUT BITUMINOUS CONCRETE PAVEMENT
- RESTORE DISTURBED LAWN AREAS (TYP.)
- RELOCATE GAZEBO
- RECTANGULAR RAPID FLASHING BEACON (SEE TRAFFIC PLAN)
- ELECTRIC SERVICE PEDESTAL (SEE ELECTRIC PLANS)
- BIKE RACK (TYP. OF 3)
- STAMPED CONCRETE
- BITUMINOUS CONCRETE DRIVEWAY
- RECTANGULAR RAPID FLASHING BEACON (SEE TRAFFIC PLAN)
- END GRANITE STONE CURB
- REINFORCED CONCRETE SIDEWALK
- BITUMINOUS CONCRETE DRIVEWAY APRON
- 5" CONCRETE SIDEWALK
- BITUMINOUS CONCRETE DRIVEWAY APRON
- STAMPED CONCRETE
- END GRANITE STONE CURB
- REINFORCED CONCRETE SIDEWALK (TYP. ACROSS DRIVEWAYS)
- BITUMINOUS CONCRETE DRIVEWAY APRON
- END RAISED BITUMINOUS SPEED TABLE
- STAMPED CONCRETE
- APPROACH RAMP (SEE DETAIL)
- GRANITE STONE CURB
- MILL AND OVERLAY BITUMINOUS CONCRETE PAVEMENT (1.5" DEPTH)
- CUT BITUMINOUS CONCRETE PAVEMENT

N/F  
Town of Manchester  
Revised #160 Spruce Street  
Total Existing Area  
165,125± S.F.  
3.791± Acres  
Revised New Area  
110,874± S.F.  
2.545± Acres

Benchmark  
Top of Spike  
T.O.M. Traverse #107  
Elev.=232.62

Benchmark  
Top of Spike  
T.O.M. Traverse #106  
Elev.=236.00



TOWN OF MANCHESTER  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION

494 MAIN STREET - P.O. BOX 191  
MANCHESTER, CT 06045-0191

LEGEND

--- WETLANDS BOUNDARY	☆ LIGHT POLE
--- RETAINING WALL	⊗ CONIFEROUS TREE
--- GUEE WALL	⊗ DEODIOUS TREE
--- STOCKADE FENCE	⊗ SANITARY MANHOLE
--- WIRE FENCE	⊗ DRAINAGE MANHOLE
--- CHAIN LINK FENCE	⊗ CATCH BASIN
--- PROPERTY LINE	⊗ CULVERT END
--- RAILROAD TRACKS	⊗ HYDRANT
--- SILT FENCE	⊗ CURB STOP
⊗ CONCRETE MONUMENT	⊗ WATER VALVE
⊗ GRANITE MONUMENT	⊗ BUTTERFLY VALVE
⊗ IRON PIPE	⊗ BLOW OFF
⊗ IRON ROD	⊗ SIGN
⊗ CONTROL POINT	⊗ DOUBLE POST SIGN
⊗ DRILL HOLE	⊗ MAIL BOX
⊗ UTILITY POLE	⊗ BOLLARD
⊗ UTILITY POLE WITH LIGHT	⊗ CONTROLLER CABINET
⊗ ELECTRIC BOX	⊗ GAS GATE
⊗ TELEPHONE BOX	⊗ CATV TUBE

PROJECT NUMBER  
**2023111**

FILENAME  
**2023111-PLAN.DWG**

NO.	DATE	FILE
-	11/08/24	FOR BIDDING
	11/27/24	ADDENDUM NO. 1

DRAWN BY: JL  
CHECKED BY: JL  
RELEASED BY: TB

DRAWING SCALE  
HORIZONTAL: 1" = 20' VERTICAL: ---  
OR AS NOTED  
20 10 0 20  
GRAPHIC SCALE

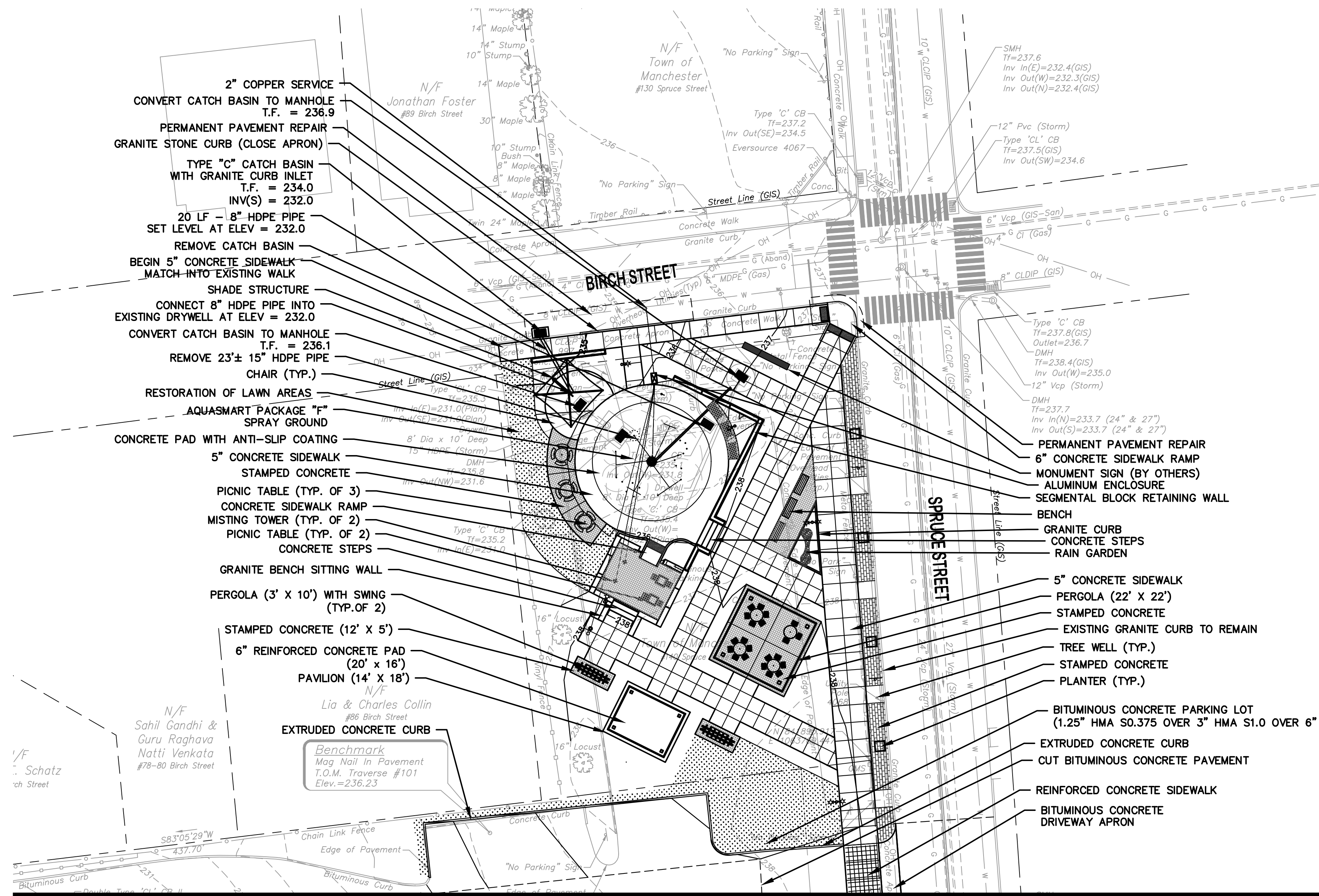
DATUM  
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION  
**SPRUCE STREET  
MANCHESTER, CT**

PROJECT TITLE  
**STREETScape IMPROVEMENTS  
SPRUCE STREET AT  
NATHAN HALE SCHOOL**

SHEET TITLE  
**SITE PLAN**

SHEET NUMBER  
**8 of 22**

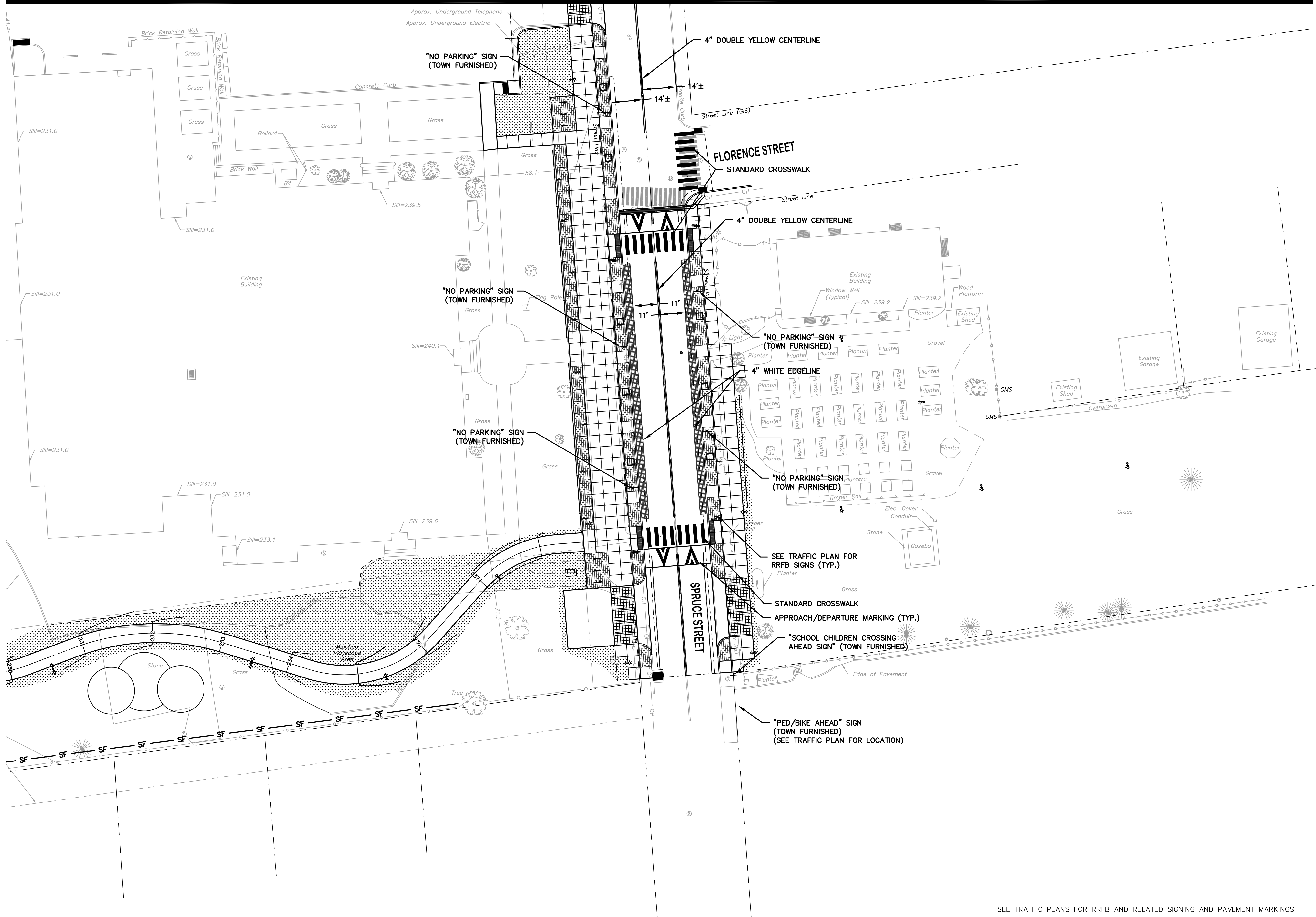


SEE SHEET 11 FOR DETAILED PARK PLAN

MATCH LINE - SEE SHEET 7



MATCH LINE - SEE SHEET 10



SEE TRAFFIC PLANS FOR RRFB AND RELATED SIGNING AND PAVEMENT MARKINGS



TOWN OF MANCHESTER  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
494 MAIN STREET - P.O. BOX 191  
MANCHESTER, CT 06045-0191

LEGEND

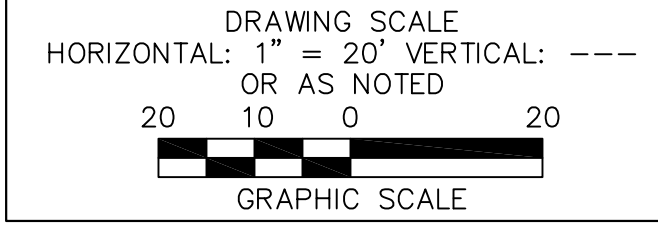
—	RETAINING WALL	☆	LIGHT POLE
—	GUIDE RAIL	⊗	CONIFEROUS TREE
—	STONE WALL	⊙	DECIDUOUS TREE
—	STOCKADE FENCE	⊕	SANITARY MANHOLE
—	WIRE FENCE	⊖	DRAINAGE MANHOLE
—	CHAIN LINK FENCE	⊗	CATCH BASIN
—	PROPERTY LINE	⊕	CULVERT END
—	RAILROAD TRACKS	⊖	HYDRANT
—	SILT FENCE	⊗	CURB STOP
—	CONCRETE MONUMENT	⊕	WATER VALVE
—	GRANITE MONUMENT	⊖	BUTTERFLY VALVE
—	IRON PIPE	⊗	BLOW OFF
—	IRON ROD	⊕	SIGN
—	CONTROL POINT	⊖	DOUBLE POST SIGN
—	DRILL HOLE	⊗	MAIL BOX
—	UTILITY POLE	⊕	BOLLARD
—	UTILITY POLE WITH LIGHT	⊖	CONTROLLER CABINET
—	TRAFFIC SPAN POLE	⊗	GAS GATE
—	ELECTRIC BOX	⊕	TELEPHONE BOX
—	WETLAND FLAG	⊖	CATV TUBE

PROJECT NUMBER  
2023111

FILENAME  
2023111-PLAN.DWG

NO.	DATE	FILE
—	11/08/24	FOR BIDDING

DRAWN BY: JL  
CHECKED BY: JL  
RELEASED BY: TB



DATUM  
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION  
**SPRUCE STREET  
MANCHESTER, CT**

PROJECT TITLE  
**STREETSCAPE IMPROVEMENTS  
SPRUCE STREET AT  
NATHAN HALE SCHOOL**

SHEET TITLE  
**PAVEMENT MARKINGS  
AND SIGNING PLAN**

SHEET NUMBER  
**9 of 22**



TOWN OF MANCHESTER  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
494 MAIN STREET - P.O. BOX 191  
MANCHESTER, CT 06045-0191

LEGEND

—	= WETLANDS BOUNDARY	☆	= LIGHT POLE
—	= RETAINING WALL	⊗	= CONIFEROUS TREE
—	= GUIDE RAIL	⊙	= DECIDUOUS TREE
—	= STONE WALL	⊕	= SANITARY MANHOLE
—	= STOCKADE FENCE	⊖	= DRAINAGE MANHOLE
—	= WIRE FENCE	⊗	= CATCH BASIN
—	= CHAIN LINK FENCE	⊕	= CULVERT END
—	= PROPERTY LINE	⊖	= HYDRANT
—	= RAILROAD TRACKS	⊗	= CURB STOP
—	= SILT FENCE	⊕	= WATER VALVE
—	= CONCRETE MONUMENT	⊖	= BUTTERFLY VALVE
—	= GRANITE MONUMENT	⊗	= BLOW OFF
—	= IRON PIPE	⊕	= SIGN
—	= IRON ROD	⊖	= DOUBLE POST SIGN
—	= CONTROL POINT	⊗	= MAIL BOX
—	= DRILL HOLE	⊕	= BOLLARD
—	= UTILITY POLE	⊖	= CONTROLLER CABINET
—	= UTILITY POLE WITH LIGHT	⊗	= GAS GATE
—	= TRAFFIC SPAN POLE	⊕	= TELEPHONE BOX
—	= ELECTRIC BOX	⊖	= TELEPHONE BOX
—	= WETLAND FLAG	⊗	= CATV TUBE

PROJECT NUMBER  
**2023111**

FILENAME  
**2023111-PLAN.DWG**

NO.	DATE	FILE
—	11/08/24	FOR BIDDING

DRAWN BY: JL  
CHECKED BY: JL  
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DRAWING SCALE  
HORIZONTAL: 1" = 20' VERTICAL: ---  
OR AS NOTED  
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GRAPHIC SCALE

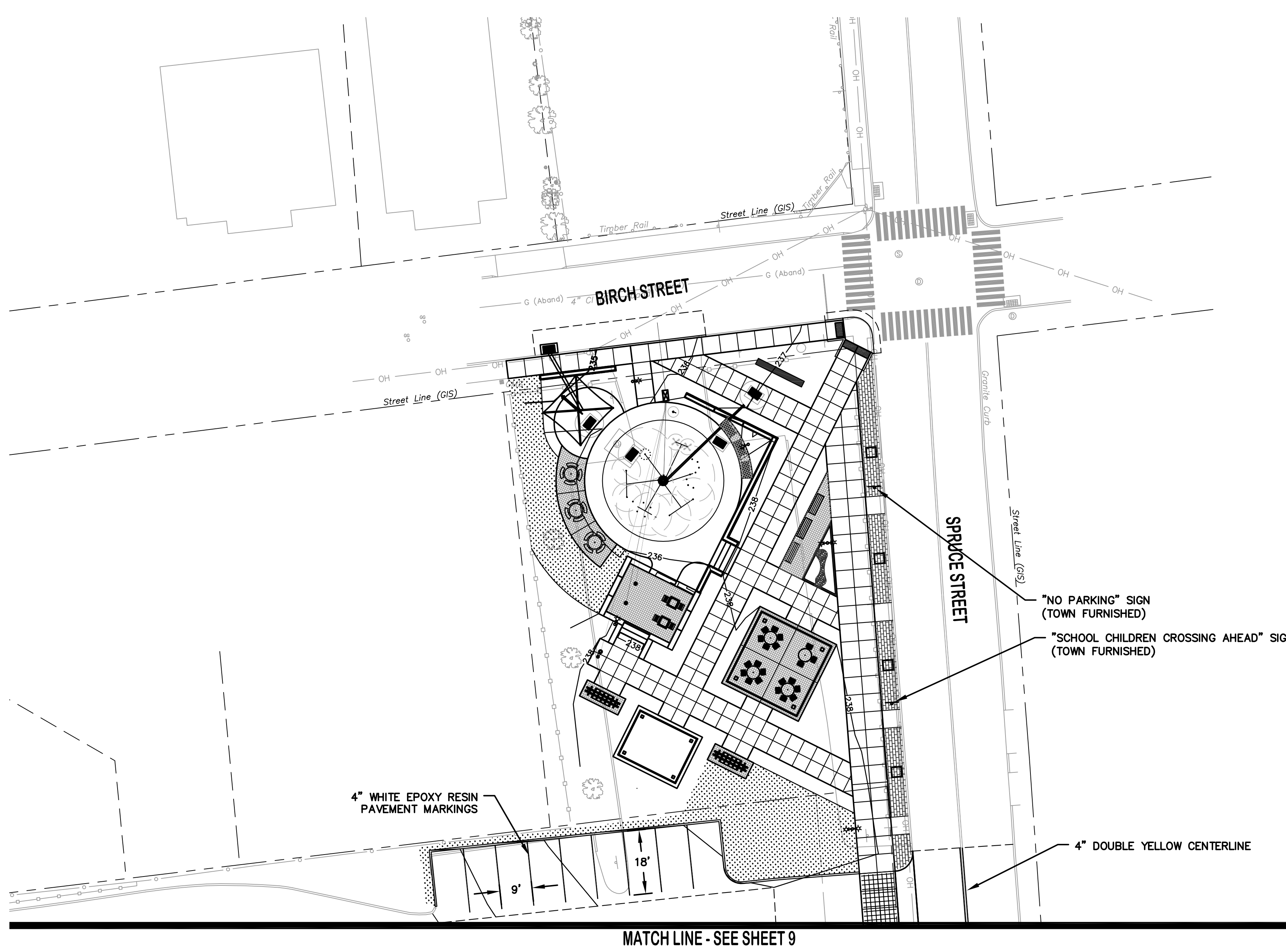
DATUM  
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION  
**SPRUCE STREET  
MANCHESTER, CT**

PROJECT TITLE  
**STREETScape IMPROVEMENTS  
SPRUCE STREET AT  
NATHAN HALE SCHOOL**

SHEET TITLE  
**PAVEMENT MARKINGS  
AND SIGNING PLAN**

SHEET NUMBER  
**10 of 22**





TOWN OF MANCHESTER  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
494 MAIN STREET - P.O. BOX 191  
MANCHESTER, CT 06045-0191

LEGEND

--- WETLANDS BOUNDARY	☆ LIGHT POLE
--- RETAINING WALL	⊗ CONIFEROUS TREE
--- GUEE WALL	⊗ DEODOROUS TREE
--- STONE WALL	⊗ SANITARY MANHOLE
--- STOCKADE FENCE	⊗ DRAINAGE MANHOLE
--- WIRE FENCE	⊗ CATCH BASIN
--- CHAIN LINK FENCE	⊗ CULVERT END
--- PROPERTY LINE	⊗ HIGHWAY
--- RAILROAD TRACKS	⊗ CURB STOP
--- SILT FENCE	⊗ WATER VALVE
⊠ CONCRETE MONUMENT	⊗ BUTTERFLY VALVE
⊠ GRANITE MONUMENT	⊗ BLOW OFF
⊠ IRON PIPE	⊗ SIGN
⊠ IRON ROD	⊗ DOUBLE POST SIGN
⊠ CONTROL POINT	⊗ MAIL BOX
⊠ DRILL HOLE	⊗ BOLLARD
⊠ UTILITY POLE	⊗ CONTROLLER CABINET
⊠ UTILITY POLE WITH LIGHT	⊗ GAS GATE
⊠ ELECTRIC BOX	⊗ GAS GATE
⊠ WETLAND FLAG	⊗ TELEPHONE BOX
	⊗ CATV TUBE

PROJECT NUMBER  
**2023111**

FILENAME  
**2023111-PLAN.DWG**

NO.	DATE	FILE
---	11/08/24	FOR BIDDING
---	11/27/24	ADDENDUM NO. 1

DRAWN BY: JL  
CHECKED BY: JL  
RELEASED BY: TB

DRAWING SCALE  
HORIZONTAL: 1" = 5' VERTICAL: ---  
OR AS NOTED  
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GRAPHIC SCALE

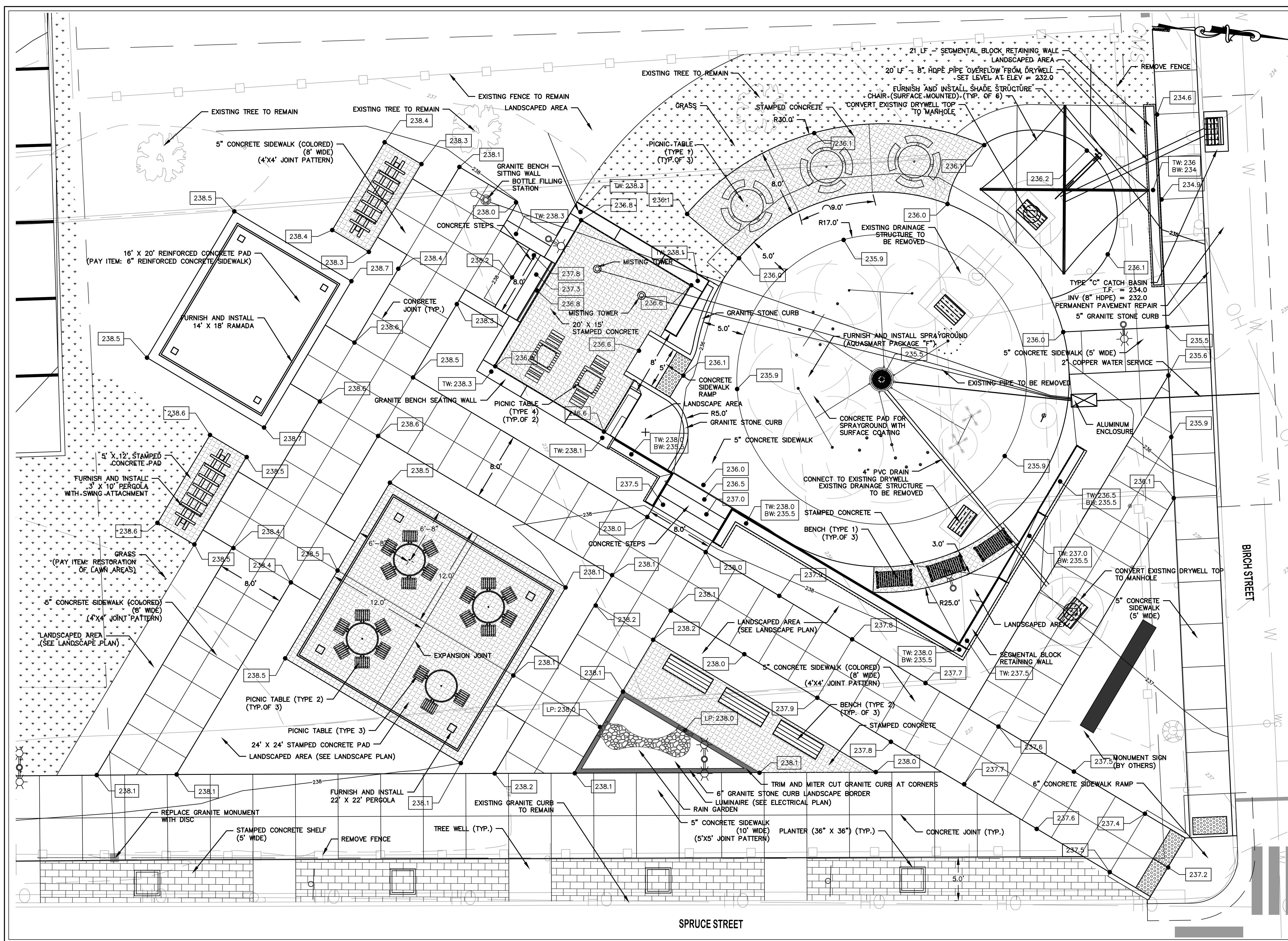
DATUM  
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION  
**SPRUCE STREET  
MANCHESTER, CT**

PROJECT TITLE  
**STREETSCAPE IMPROVEMENTS  
SPRUCE STREET AT  
NATHAN HALE SCHOOL**

SHEET TITLE  
**POCKET PARK  
DETAIL PLAN**

SHEET NUMBER  
**11 of 22**



SPRUCE STREET

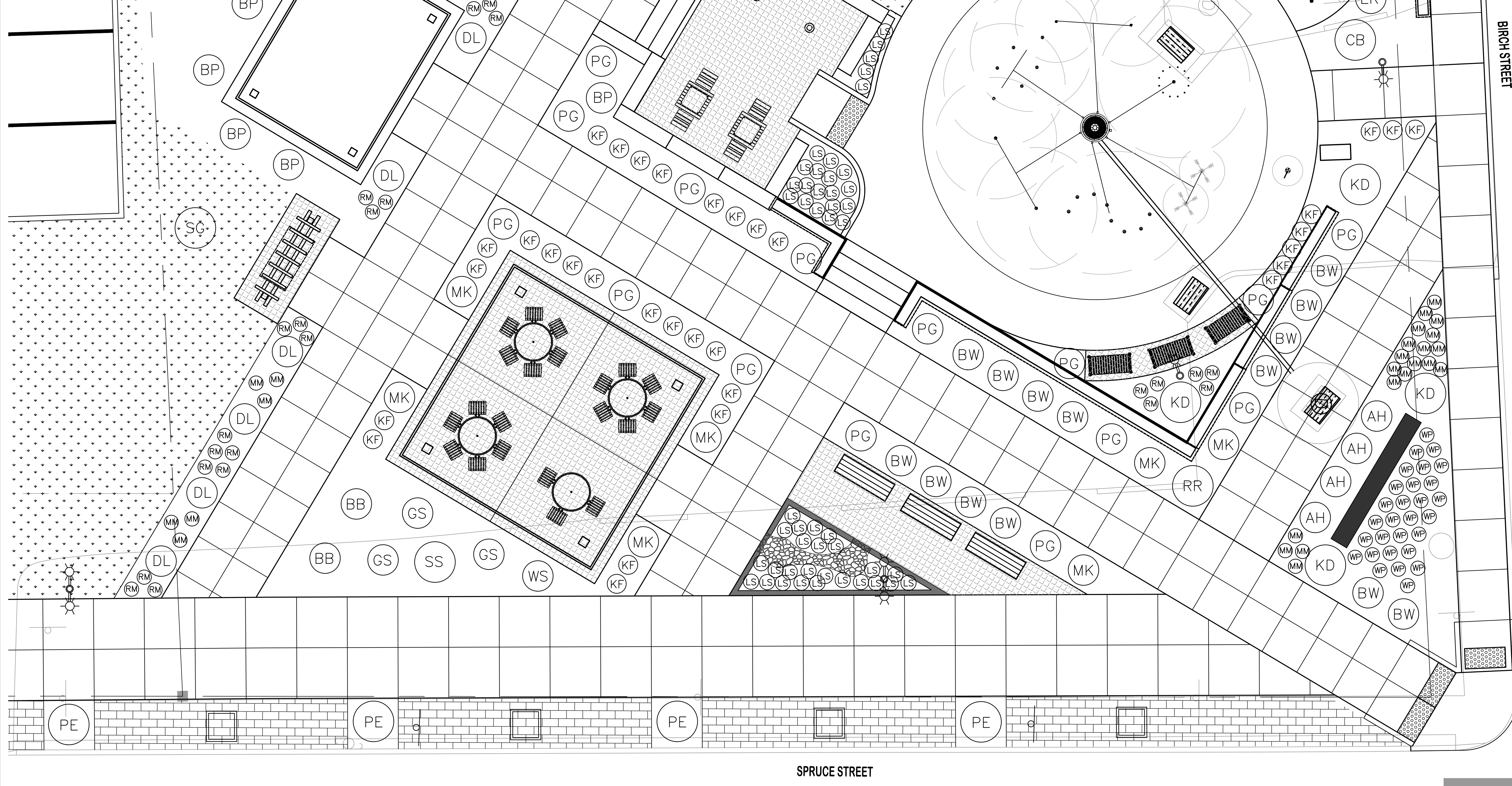
BIRCH STREET

TREES			
SYMBOL	PLANT NAME	SIZE	QUANTITY
AB	AMERICAN BEECH	2" CAL.	1
BB	BABY BLUE EYES SPRUCE	4" TO 5"	2
BP	BLUE POINT JUNIPER	6' TO 7'	8
CA	CRAB APPLE	2" CAL.	1
CB	CLUMP BIRCH	10' TO 12"	3
DL	DWARF KOREAN LILAC	7 GAL.	8
ER	ENKIANTHUS REDVEIN	3' TO 4'	2
GS	GLOBE BLUE SPRUCE	24" TO 30"	3
KD	KOUSSA DOGWOOD	2" CAL.	7
M	MAGNOLIA	10' TO 12"	2
MK	MISS KIM LILAC	7 GAL.	7
PE	PRINCETON AMERICAN ELM	6' TO 7'	15
RC	RED HORSE CHESTNUT	2" CAL.	1
RR	RUBY FALLS REDBUD	2" CAL.	1
SG	SWEETGUM SLENDER	2" CAL.	3
SM	SUGAR MAPLE	3" CAL.	3
SO	SCARLET RED OAK	3" CAL.	1
SS	SERBIAN SPRUCE	7' TO 8'	1
WS	WEEPING GREEN SPRUCE	6' TO 7'	1

SHRUBS			
SYMBOL	PLANT NAME	SIZE	QUANTITY
AH	ANNABELLE HYDRANGIA	3 GAL.	4
BW	WINTER GEM BUXUS	3 GAL.	14

GRASSES			
SYMBOL	PLANT NAME	SIZE	QUANTITY
KF	KARL FOERSTER GRASS	2 GAL.	47
LS	LITTLE BLUESTEM GRASS	2 GAL.	23
PG	PAMPAS GRASS	3 GAL.	20

PERENNIALS			
SYMBOL	PLANT NAME	SIZE	QUANTITY
MM	MOUNTAIN MINT	1 GAL.	25
RM	ROSE MILKWEED	1 GAL.	23
WP	WHITE CREEPING PHLOX	1 GAL.	29



TOWN OF MANCHESTER  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
494 MAIN STREET - P.O. BOX 191  
MANCHESTER, CT 06045-0191

LEGEND	
	WETLAND BOUNDARY
	RETAINING WALL
	STONE WALL
	STOCKADE FENCE
	WIRE FENCE
	CHAIN LINK FENCE
	PROPERTY LINE
	RAILROAD TRACKS
	CONCRETE MONUMENT
	GRANITE MONUMENT
	IRON PIPE
	IRON ROD
	CONTROL POINT
	DRILL HOLE
	UTILITY POLE
	UTILITY POLE WITH LIGHT
	TRAFFIC SPAN POLE
	ELECTRIC BOX
	WETLAND FLAG
	LIGHT POLE
	DECIDUOUS TREE
	SANITARY MANHOLE
	DRAINAGE MANHOLE
	CATCH BASIN
	CULVERT END
	HYDRANT
	CURB STOP
	WATER VALVE
	BUTTERFLY VALVE
	BLOW OFF
	SIGN
	DOUBLE POST SIGN
	MAIL BOX
	BOLLARD
	CONTROLLER CABINET
	GAS GATE
	TELEPHONE BOX
	CATV TUBE

PROJECT NUMBER  
**2023111**

FILENAME  
**2023111-PLAN.DWG**

NO.	DATE	FILE
-	11/08/24	FOR BIDDING
	11/27/24	ADDENDUM NO. 1

DRAWN BY: JL  
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DRAWING SCALE  
HORIZONTAL: 1" = 5' VERTICAL: ---  
OR AS NOTED  
5 2.5 0 5  
GRAPHIC SCALE

DATUM  
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION  
**SPRUCE STREET  
MANCHESTER, CT**

PROJECT TITLE  
**STREETScape IMPROVEMENTS  
SPRUCE STREET AT  
NATHAN HALE SCHOOL**

SHEET TITLE  
**POCKET PARK  
LANDSCAPING PLAN**

SHEET NUMBER  
**12 of 22**

MOVEMENT DIAGRAM																																								
NTOR	PHASE 1					PHASE 2					PHASE 3					PHASE 4					PHASE 5					PHASE 6					PHASE 7					PHASE 8				
	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL									
F																																								
A																																								
C																																								
E																																								
#																																								
I	MIN GRN																																							
N	WALK																																							
T	PED CLR																																							
R	VEH EXT																																							
V	MAX 1																																							
E	MAX 2																																							
R	YELLOW																																							
V	RED																																							
E	ADD INIT																																							
R	MAX INIT																																							
V	TBR																																							
E	TTR																																							
R	MIN GAP																																							
V	MODE																																							
E	INIT START																																							

TECHNICAL NOTES		OFFICE RECORD	
RECTANGULAR RAPID FLASHERS TO FLASH FOR 15 SECONDS UPON ACTUATION. (8 - 17 SECONDS ADJUSTABLE).		REV #	TTR #
15 SECOND TIMER SHOULD RESET UPON EACH ACTUATION.		SM #	SIGNAL REVISED:
FLORENCE ST CROSSING RRFB AND NATHAN HALE GREENWAY CROSSING RRFB PAIRS TO ACTUATE INDEPENDENTLY		INSTALLED RECTANGULAR RAPID FLASHING BEACON (RRFB) TYPE B (DOUBLE SIDED ASSEMBLIES) AT FLORENCE STREET (EAST SIDE RESOURCE CENTER) CROSSING AND AT NATHAN HALE GREENWAY (#160-163 MID-BLOCK CROSSWALK) UNDER PROJECT 2023111 (ASSOCIATED WITH EAST SIDE POCKET PARK.)	

**RECTANGULAR RAPID FLASHING BEACON (RRFB) CONSTRUCTION NOTES:**

ALL TRAFFIC EQUIPMENT IS NEW.

ALL TRAFFIC EQUIPMENT TO BE POWDER COATED BLACK PER SPECIFICATION.

STAKE ALL RIGHT OF WAY PRIOR TO EXCAVATION.

SEE SPECIAL PROVISION ITEM #1117111 - SPECIFICATIONS - RECTANGULAR RAPID FLASHING BEACON - TYPE A.

SEE SPECIAL PROVISION ITEM #1117111 - SPECIFICATIONS - RECTANGULAR RAPID FLASHING BEACON - TYPE B.

**RRFB TYPES:**  
 TYPE A - SINGLE SIDED FLASHER AND SINGLE SIDED SIGNS. TO BE INSTALLED FACING ONCOMING TRAFFIC.  
 TYPE B - DOUBLE SIDED FLASHER AND BACK-TO-BACK MOUNTED SIGNS.

ALL RRFB TYPES TO BE EQUIPPED WITH CROSSWALK ILLUMINATOR, TAPCO SAFEWALK OR APPROVED EQUAL AT ALL RRFB LOCATIONS. FINAL PLACEMENT TO BE INSTALLED AS DIRECTED BY THE MANUFACTURER'S REPRESENTATIVE. LIGHTS TO ACTUATE DUSK TO DAWN IN UNISON WITH SYSTEM ACTIVATION.

RECTANGULAR RAPID FLASHING BEACON TO BE PEDESTRIAN ACTUATED, SOLAR POWERED AND WIRELESS ACTIVATED.

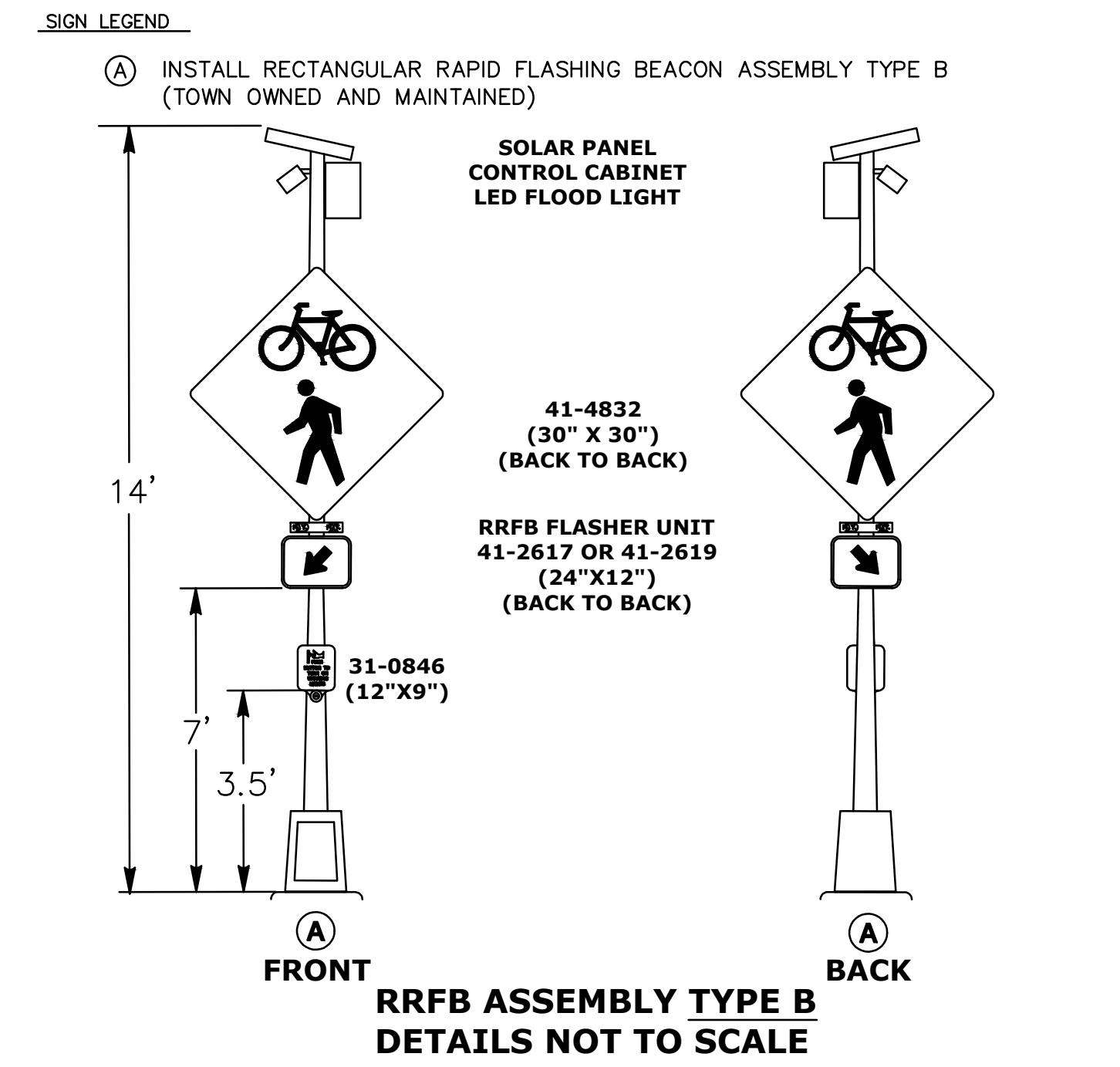
INSTALL RRFB ASSEMBLIES ON 14' PEDESTALS.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES AND/OR SIGNS SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ENGINEER, PRIOR TO INSTALLATION.

CONTRACTOR TO VERIFY LOCATION OF PEDESTAL FOUNDATIONS AND LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO INSTALLING PEDESTAL FOUNDATIONS.

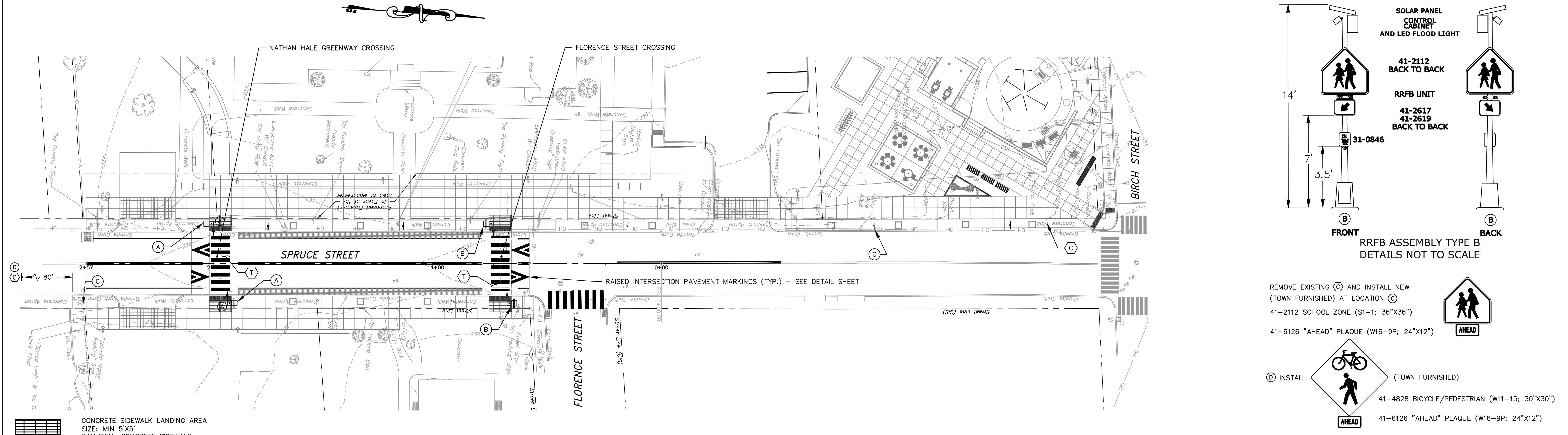
INSTALL PEDESTAL FOUNDATIONS ADJACENT TO THE LANDING AREAS. CONTRACTOR TO ENSURE MINIMUM 48" ADA CLEAR PATH IS PROVIDED ADJACENT TO AND AROUND PEDESTAL FOUNDATIONS. IF A MINIMUM 48" FREE PATH IS UNAVAILABLE, NOTIFY THE ENGINEER BEFORE PROCEEDING.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISIONS.



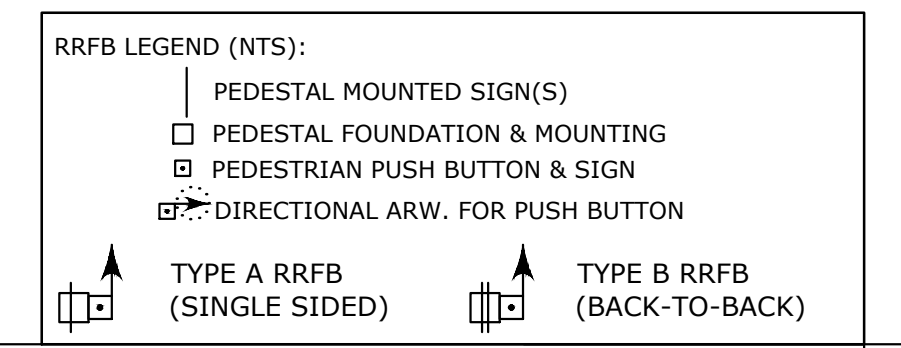
- NOTES:**
- TOWN TO MAINTAIN ALL SIGNS AND PAVEMENT MARKINGS.
  - INSTALL BAR TYPE CROSSWALK (16" X 24" X 8') - TOWN MAINTAINED
  - SEE SEPARATE SITE DESIGN SHEET FOR RRFB PEDESTAL INSTALLATION LOCATIONS AND NON-TRAFFIC SIGNAL EQUIPMENT ITEMS.
  - SEE SEPARATE SIGNING & PAVEMENT MARKING SHEETS FOR ALL OTHER SIGNS AND PAVEMENT MARKINGS.

- CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:**
- REVISE ALL PAVEMENT MARKINGS ASSOCIATED WITH THE CROSSWALK REVISIONS AS SHOWN.
  - INSTALL BAR TYPE CROSSWALKS (24" - 16" X 8' MIN.)
  - ERADICATE ANY CONFLICTING PAVEMENT MARKINGS.



**CONCRETE SIDEWALK LANDING AREA**  
 SIZE: MIN 5'X5'  
 PAY ITEM: CONCRETE SIDEWALK  
 TYPICAL CROSS-SLOPE: 1.5%  
 MAXIMUM CROSS-SLOPE: 2% ALL DIRECTIONS  
 NOTE: MINIMUM ADA SPACE REQUIRED TO SAFELY CHANGE DIRECTIONS USING WHEELCHAIR OR SIMILAR MOBILITY DEVICE.

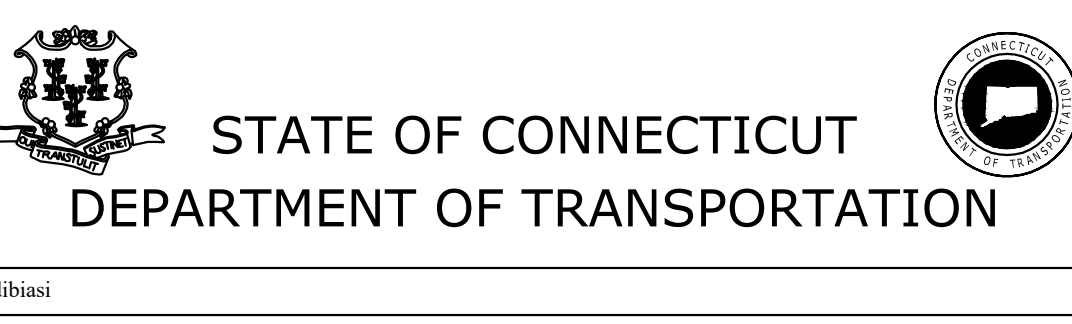
**CONCRETE SIDEWALK RAMP DETECTABLE WARNING TILE**  
 SIZE: MIN RAMP WIDTH X 2'  
 PAY ITEM: DETECTABLE WARNING STRIP (TOWN PROVIDED)



NO.	DATE	REVISION DESCRIPTION
	11/8/24	BID PLAN

- LEGEND:**
- R, Y, G RED, YEL, GRN
  - RED ARROW
  - YELLOW ARROW
  - GREEN ARROW
  - WALK/ PED. CLR
  - D.W. DON'T WALK
  - FL. FLASHING
  - PROPOSED WOOD SPAN POLE
  - EXISTING WOOD SPAN POLE
  - PROPOSED STEEL SPAN POLE
  - EXISTING STEEL SPAN POLE
  - PROPOSED UTILITY POLE
  - EXISTING UTILITY POLE
  - PEDESTAL MOUNTING
  - PEDESTRIAN PUSH BUTTON & SIGN
  - DIRECTIONAL ARW. FOR PUSH BUTTON
  - TRAFFIC SIGNAL FACE
  - PEDESTRIAN SIGNAL FACE
  - DET. LEADS IN SAW CUT
  - PROPOSED RMC (RIGID METAL CONDUIT)
  - EXISTING RMC (RIGID METAL CONDUIT)
  - AUXILIARY TERMINATION CABINET
  - AUXILIARY EQUIPMENT CABINET
  - VIDEO DETECTOR ZONE
  - PROPOSED CONTROLLER
  - EXISTING CONTROLLER
  - LOOP DETECTOR
  - SYSTEM DETECTOR
  - MAGNETIC DETECTOR
  - OPTICAL DETECTOR
  - VIDEO DETECTOR
  - AUDIO DETECTOR
  - VIDEO CAMERA CABLE
  - CABLE CLOSURE
  - WIRELESS SENSOR
  - WIRELESS RECEIVER
  - WIRELESS TRANSCIEVER
  - GUY WIRE
  - PROPOSED HANDHOLE
  - EXISTING HANDHOLE

DATE PLOTTED : R:\Project\Public Works\2023111 - East Side Pocket Park-Nathan Hale Improvements\Proj\2023111-RRFB.dwg, 11/12/2024 10:34:23 AM, jdbiasi



ENGINEER	TRAFFIC DESIGN	ELECTRICAL DESIGN
JOHN E. DIBIASI	JOHN E. DIBIASI	N/A
JEFF LAMALVA	JEFF LAMALVA	N/A
JEFF LAMALVA	JEFF LAMALVA	N/A
JEFF LAMALVA	JEFF LAMALVA	N/A
11/8/2024		

SPRUCE STREET  
 AT FLORENCE STREET CROSSING  
 &  
 AT NATHAN HALE GREENWAY CROSSING

REV # N/A	INTERSECTION # 076-___
ENERGY BY SOLAR	ADDRESS #153-163 SPRUCE ST
MAINT LEVEL: N/A	SERVICE POLE: SOLAR
UNMETERED SERVICE	

TOWN: TOWN OF MANCHESTER  
 PROJECT NO: 2023111  
 DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN  
 DRAWING NO: TCS-01  
 SHEET NO: 13 OF 22

SCALE 1" = 20'

REVISIONS

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**STREETSCAPE IMPROVEMENTS SPRUCE STREET  
 AT NATHAN HALE**  
 SPRUCE STREET, MANCHESTER CONNECTICUT

BEMIS ASSOCIATES, L.L.C.  
 Consulting Engineers  
 185 Main Street  
 Farmington, CT 06032  
 P: (860) 271-7770  
 www.bemisassociates.com

TITLE  
**ELECTRICAL  
 SITE LIGHTING  
 PLAN**

DATE:  
 NOVEMBER 8, 2024

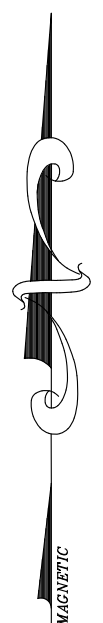
DWG. NO.  
**14 of 22**



**SITE LIGHTING PLAN PART A**  
 SCALE: 1"=20'-0"

BRANCH CIRCUIT WIRING SCHEDULE

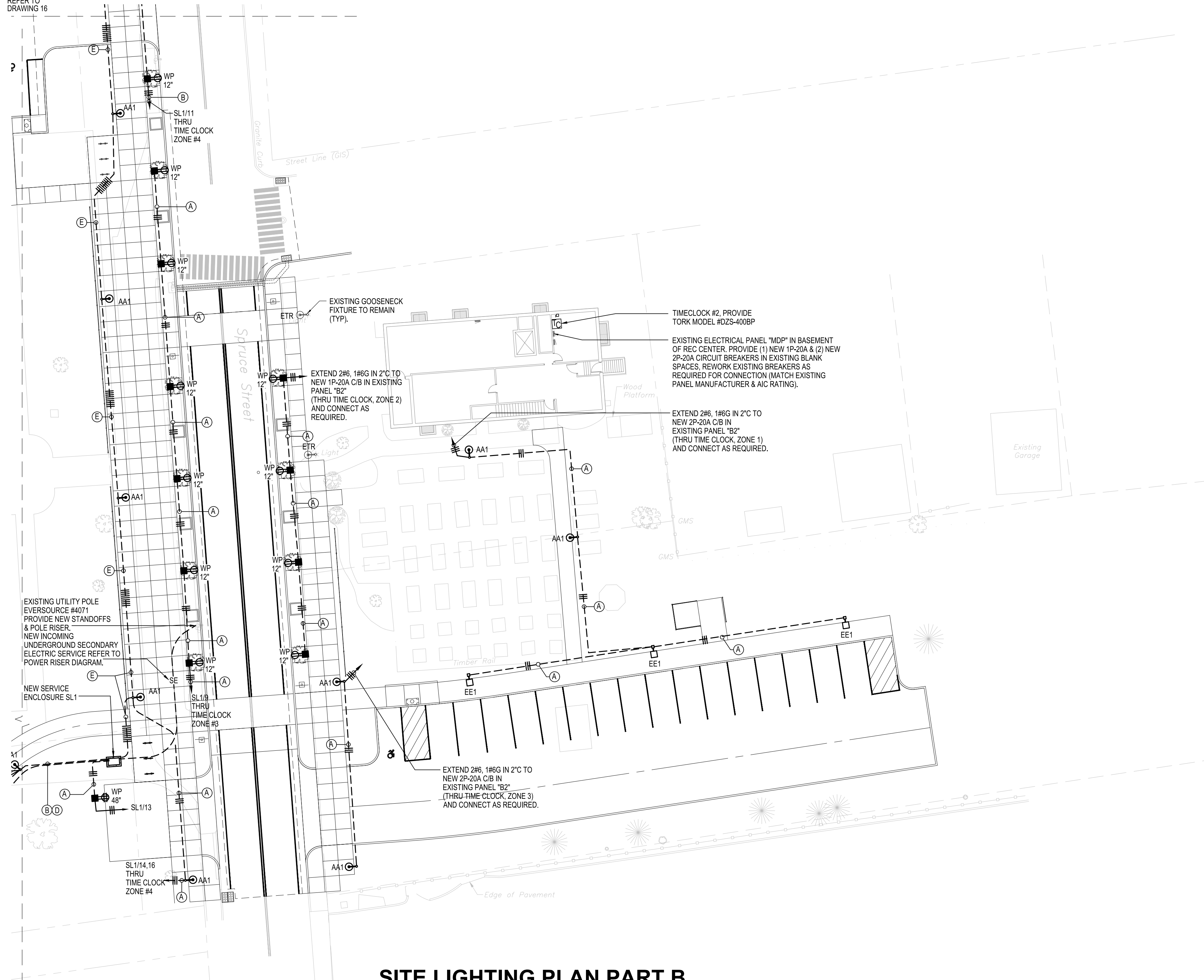
SYMBOL	BRANCH CIRCUIT WIRING SIZE
A	2 X #6 THWN-2 AND 1 X #6 THWN-2 GND. IN 2" C.
B	2 X #3 THWN-2 AND 1 X #3 THWN-2 GND. IN 2" C.
C	3 X #3 THWN-2 AND 1 X #3 THWN-2 GND. IN 2" C.
D	5 X #3 THWN-2 AND 2 X #3 THWN-2 GND. IN (2) 2" C.
E	6 X #3 THWN-2 AND 3 X #3 THWN-2 GND. IN (3) 2" C.



MATCHLINE  
FOR CONTINUATION  
REFER TO  
DRAWING 14

MATCHLINE  
FOR CONTINUATION  
REFER TO  
DRAWING 16

MATCHLINE  
FOR CONTINUATION  
REFER TO  
DRAWING 14



**SITE LIGHTING PLAN PART B**  
SCALE: 1"=20'-0"

BRANCH CIRCUIT WIRING SCHEDULE

SYMBOL	BRANCH CIRCUIT WIRING SIZE
(A)	2 X #6 THWN-2 AND 1 X #6 THWN-2 GND. IN 2" C.
(B)	2 X #3 THWN-2 AND 1 X #3 THWN-2 GND. IN 2" C.
(C)	3 X #3 THWN-2 AND 1 X #3 THWN-2 GND. IN 2" C.
(D)	5 X #3 THWN-2 AND 2 X #3 THWN-2 GND. IN (2) 2" C.
(E)	6 X #3 THWN-2 AND 3 X #3 THWN-2 GND. IN (3) 2" C.

REVISIONS

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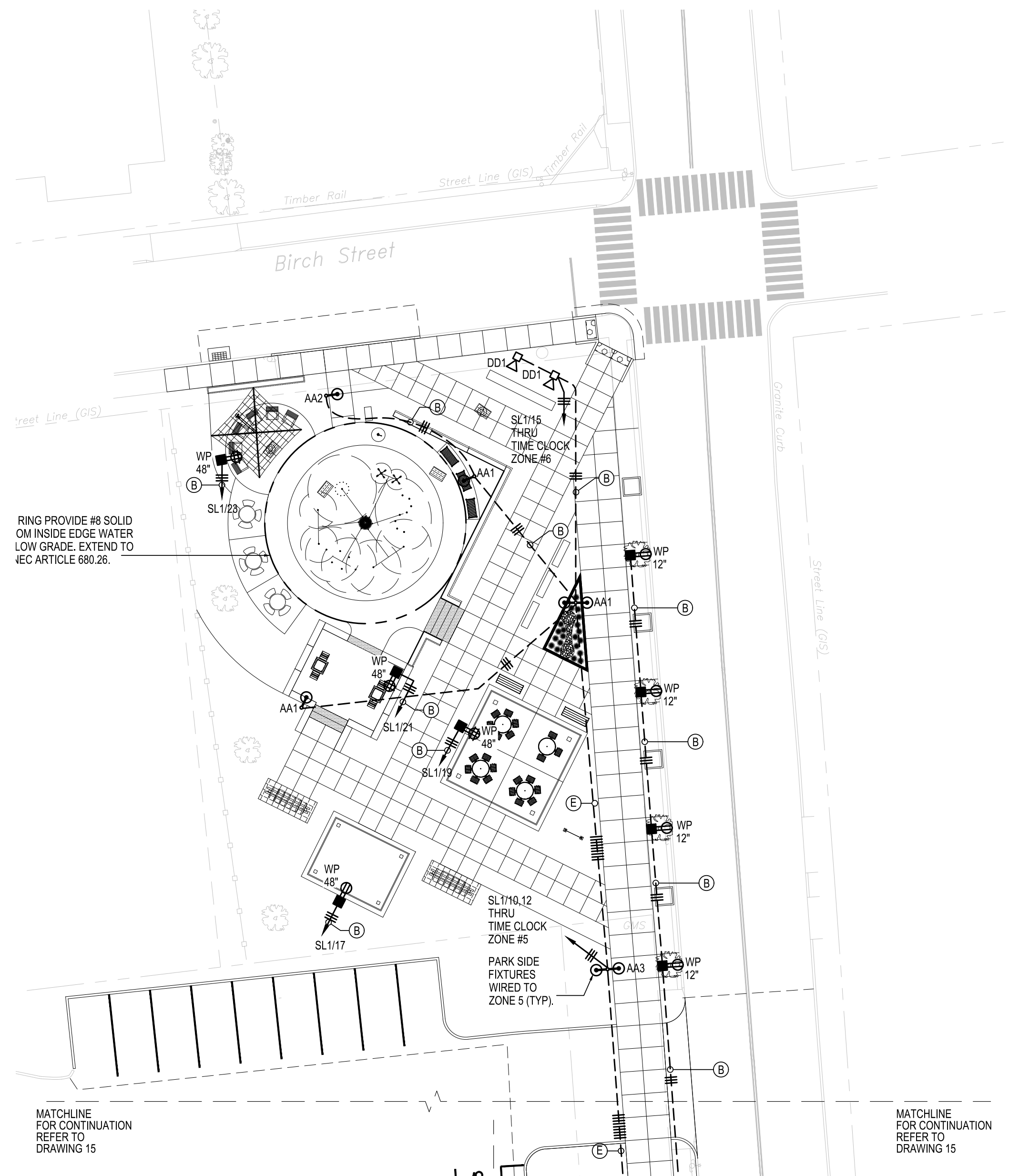
**STREETSCAPE IMPROVEMENTS SPRUCE STREET  
AT NATHAN HALE**  
SPRUCE STREET, MANCHESTER CONNECTICUT

BEMIS ASSOCIATES, L.L.C.  
Consulting Engineers  
185 Main Street  
Farmington, CT 06032  
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TITLE  
**ELECTRICAL  
SITE LIGHTING  
PLAN**

DATE:  
NOVEMBER 8, 2024

DWG. NO.  
**15 of 22**



**SITE LIGHTING PLAN PART C**  
SCALE: 1"=20'-0"

BRANCH CIRCUIT WIRING SCHEDULE

SYMBOL	BRANCH CIRCUIT WIRING SIZE
(A)	2 X #6 THWN-2 AND 1 X #6 THWN-2 GND. IN 2" C.
(B)	2 X #3 THWN-2 AND 1 X #3 THWN-2 GND. IN 2" C.
(C)	3 X #3 THWN-2 AND 1 X #3 THWN-2 GND. IN 2" C.
(D)	5 X #3 THWN-2 AND 2 X #3 THWN-2 GND. IN (2) 2" C.
(E)	6 X #3 THWN-2 AND 3 X #3 THWN-2 GND. IN (3) 2" C.

REVISIONS

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NOVEMBER 8, 2024

DWG. NO.

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### GENERAL NOTES

- THE CONTRACTOR SHALL FIELD VERIFY AND OBTAIN ALL NECESSARY DIMENSIONS TO COORDINATE WORK TO BE DONE.
- FINISHED WORK: THE INTENT OF THE SPECIFICATIONS AND DRAWINGS IS TO CALL FOR FINISHED WORK, COMPLETED, TESTED AND READY FOR OPERATION.
- GOOD PRACTICE: IT IS NOT INTENDED THAT THE DRAWINGS SHOW EVERY CONDUIT, JUNCTION BOX, FITTING OR MINOR DETAIL AND IT IS UNDERSTOOD THAT WHILE THE DRAWINGS MUST BE FOLLOWED AS CLOSELY AS CIRCUMSTANCES WILL PERMIT, THE SYSTEMS SHALL BE INSTALLED ACCORDING TO THE INTENT AND MEANING OF THE CONTRACT DOCUMENTS AND IN ACCORDANCE WITH GOOD PRACTICE.
- ANY APPARATUS, APPLIANCE, MATERIAL OR WORK NOT SHOWN ON DRAWINGS BUT MENTIONED IN SPECIFICATIONS OR VICE VERSA, OR ANY INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE AND PERFECT IN ALL RESPECTS AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED, SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
- CODES AND STANDARDS - COMPLY WITH ALL FEDERAL, STATE AND LOCAL CODES AND STANDARDS WHEREVER APPLICABLE INCLUDING THE FOLLOWING: 2022 AMENDMENT TO THE 2022 CONNECTICUT STATE BUILDING CODE SUPPLEMENT, 2022 INTERNATIONAL BUILDING CODE, 2020 NATIONAL ELECTRICAL CODE, ILLUMINATING ENGINEERING SOCIETY LIGHTING HANDBOOK, UNDERWRITERS LABORATORIES, NEMA STANDARDS.
- NOTE THAT THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF THE ELECTRICAL EQUIPMENT AND SYSTEMS, WITHOUT SHOWING EVERY DETAIL AND FITTING.
- THE NUMBER OF WIRES ON A CONDUIT RUN IS INDICATED ON THE DRAWINGS BY CROSS LINES ON THE CONDUIT RUNS. PROVIDE CODE-SIZED CONDUIT FOR THE NUMBER AND SIZE OF WIRES UNLESS A LARGER SIZE IS SHOWN ON THE DRAWINGS. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- BRANCH CIRCUIT WIRING AND ARRANGEMENT OF HOME RUNS HAS BEEN DESIGNED FOR MAXIMUM ECONOMY CONSISTENT WITH ADEQUATE SIZING FOR VOLTAGE DROPS, CIRCUIT IMPACTS, AND OTHER CONSIDERATIONS. INSTALL THE WIRING WITH CIRCUITS ARRANGED AS SHOWN ON THE DRAWINGS, EXCEPT AS APPROVED IN ADVANCE BY THE ARCHITECT AND ENGINEER. DO NOT MAKE CHANGES WITHOUT PRIOR APPROVAL.
- PROVIDE A SEPARATE NEUTRAL CONDUCTOR FOR EACH 120V AND 208V SINGLE PHASE CIRCUIT. DO NOT USE A COMMON NEUTRAL FOR GROUPS OF CIRCUITS. PROVIDE A SEPARATE GROUND WIRE FOR EACH CIRCUIT BACK TO THE RESPECTIVE PANEL GROUND. IF MORE THAN 3 CURRENT CARRYING CONDUCTORS ARE INSTALLED IN ONE CONDUIT THEY SHALL BE DERATED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. DO NOT INSTALL MORE THAN THREE 30 AMP SINGLE PHASE OR FOUR 20 AMP SINGLE PHASE CIRCUITS IN THE SAME CONDUIT. PROVIDE A DEDICATED CONDUIT FOR EACH 3-PHASE CIRCUIT. DO NOT MIX LIGHTING AND POWER CIRCUITS IN THE SAME CONDUIT.

### DRAWING LEGEND

SYMBOL	DESCRIPTION	ABBREVIATION	DESCRIPTION
	FULL CUTOFF DECORATIVE LED GOOSENECK LIGHTING FIXTURE MOUNTED ON 12" ORNAMENTAL STEEL POLE WITH BANNER ARM. SUBLETTER INDICATES TYPE.	A	AMPS.
	DUAL HEAD FULL CUTOFF DECORATIVE LED GOOSENECK LIGHTING FIXTURE MOUNTED ON 12" ORNAMENTAL STEEL POLE WITH BANNER ARM. SUBLETTER INDICATES TYPE.	AFF	ABOVE FINISHED FLOOR.
	DUAL HEAD FULL CUTOFF DECORATIVE LED GOOSENECK LIGHTING FIXTURE MOUNTED ON 12" ORNAMENTAL STEEL POLE WITH BANNER ARM. SUBLETTER INDICATES TYPE.	C	CONDUIT.
	DUAL HEAD ADJUSTABLE LED BASKETBALL COURT LIGHTING FIXTURE.	GFCI	GROUND FAULT CIRCUIT INTERRUPTER
	FULL CUTOFF LED SHOEBOX LIGHTING FIXTURE MOUNTED ON 20" SQUARE STEEL POLE.	GND	GROUND.
	LED SIGN LIGHT WITH SHROUD	NTS	NOT TO SCALE.
	GFCI TYPE DUPLEX RECEPTACLE MOUNTED IN 12" PEDOC POWER PEDESTAL.	RMC	RIGID METAL CONDUIT VOLTS.
	GFCI TYPE QUAD RECEPTACLE MOUNTED IN 48" PEDOC POWER PEDESTAL.		
	TIME CLOCK		
	FLUSH PULLBOX, SIZED PER NEC.		
	SITE ELECTRICAL ENCLOSURE WITH PAD (SEE DETAIL).		
	BASKETBALL COURT PEDESTAL, PUSH-BUTTON (SEE DETAIL).		
	UNDERGROUND CONDUIT		
	INCOMING UNDERGROUND SECONDARY ELECTRIC SERVICE.		
	BRANCH CIRCUIT WIRING. CROSS LINES INDICATE NUMBER OF CONDUCTORS.		
	BRANCH CIRCUIT HOMERUN IN CONDUIT. CROSS LINES INDICATE NUMBER OF CONDUCTORS.		

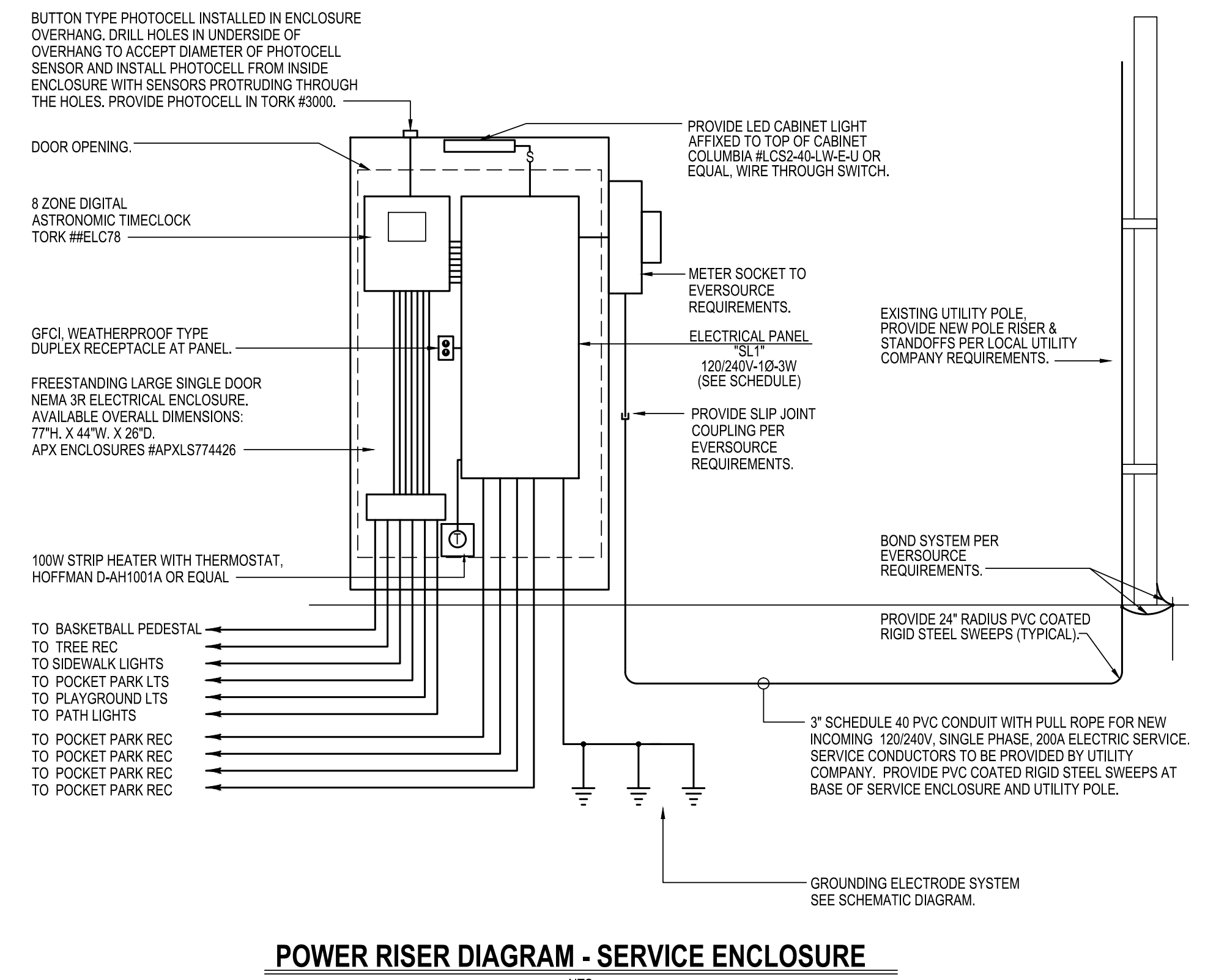
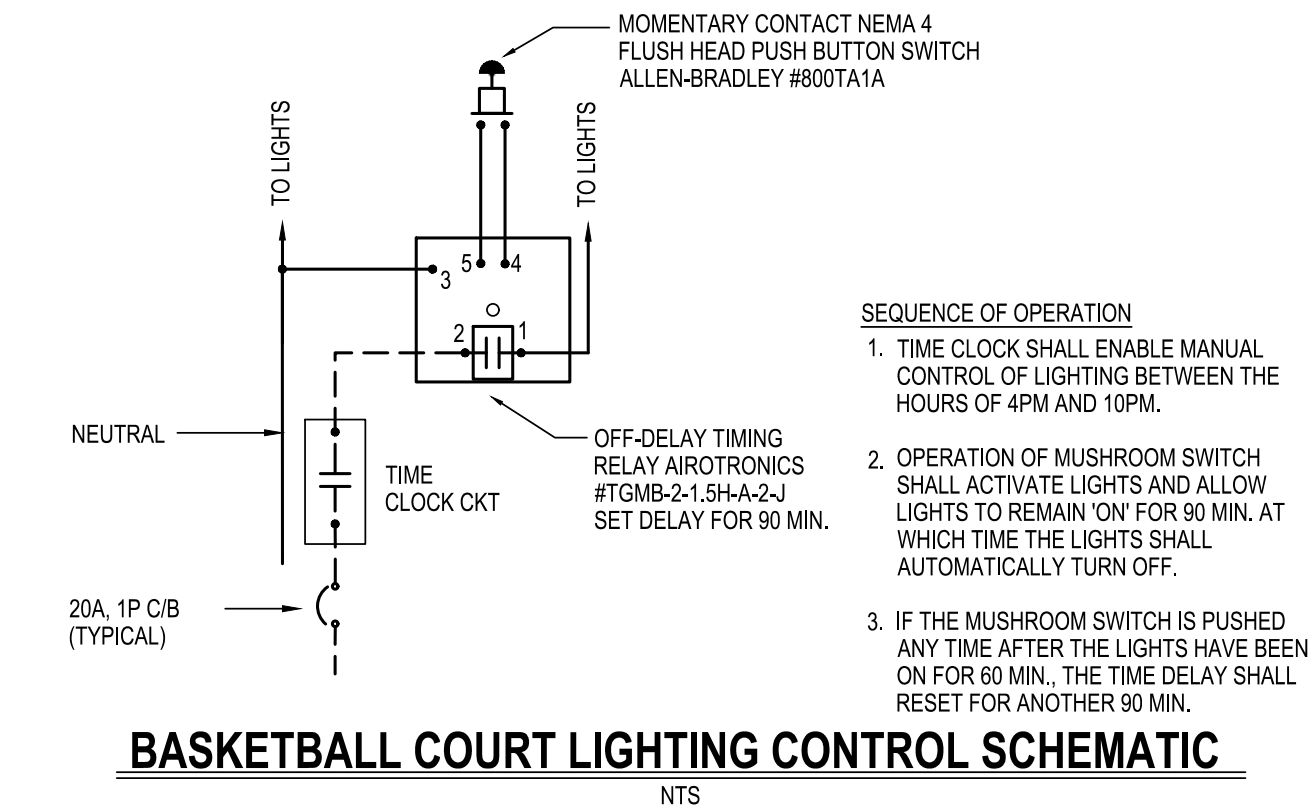
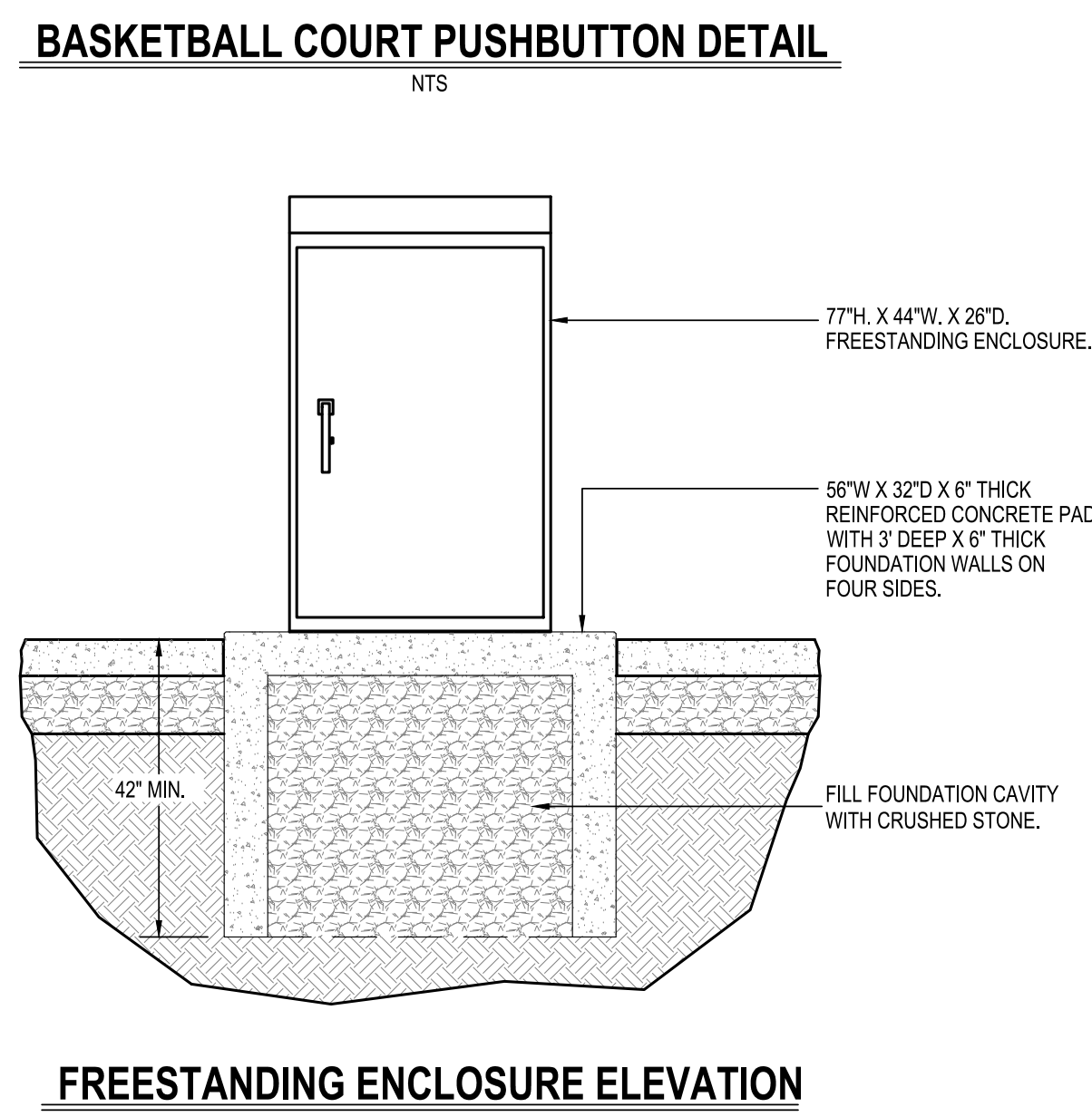
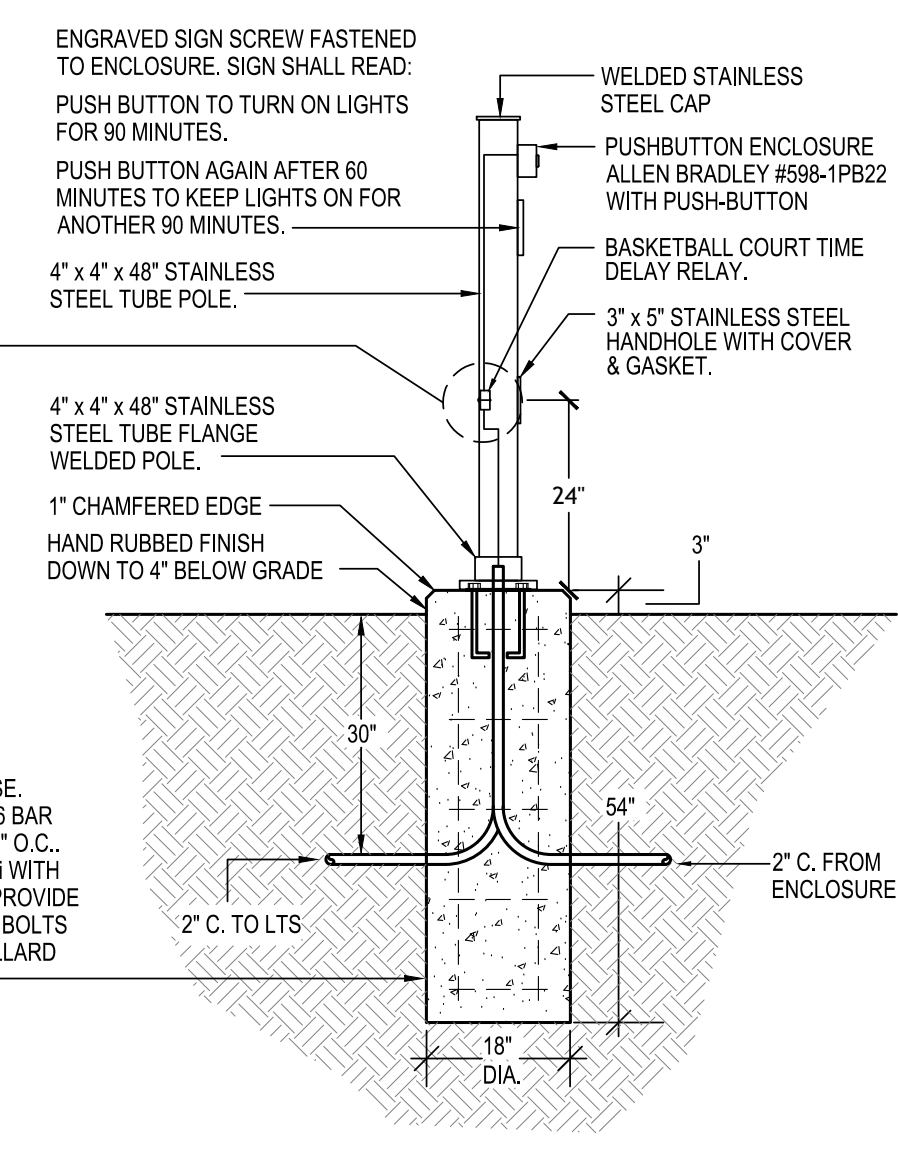
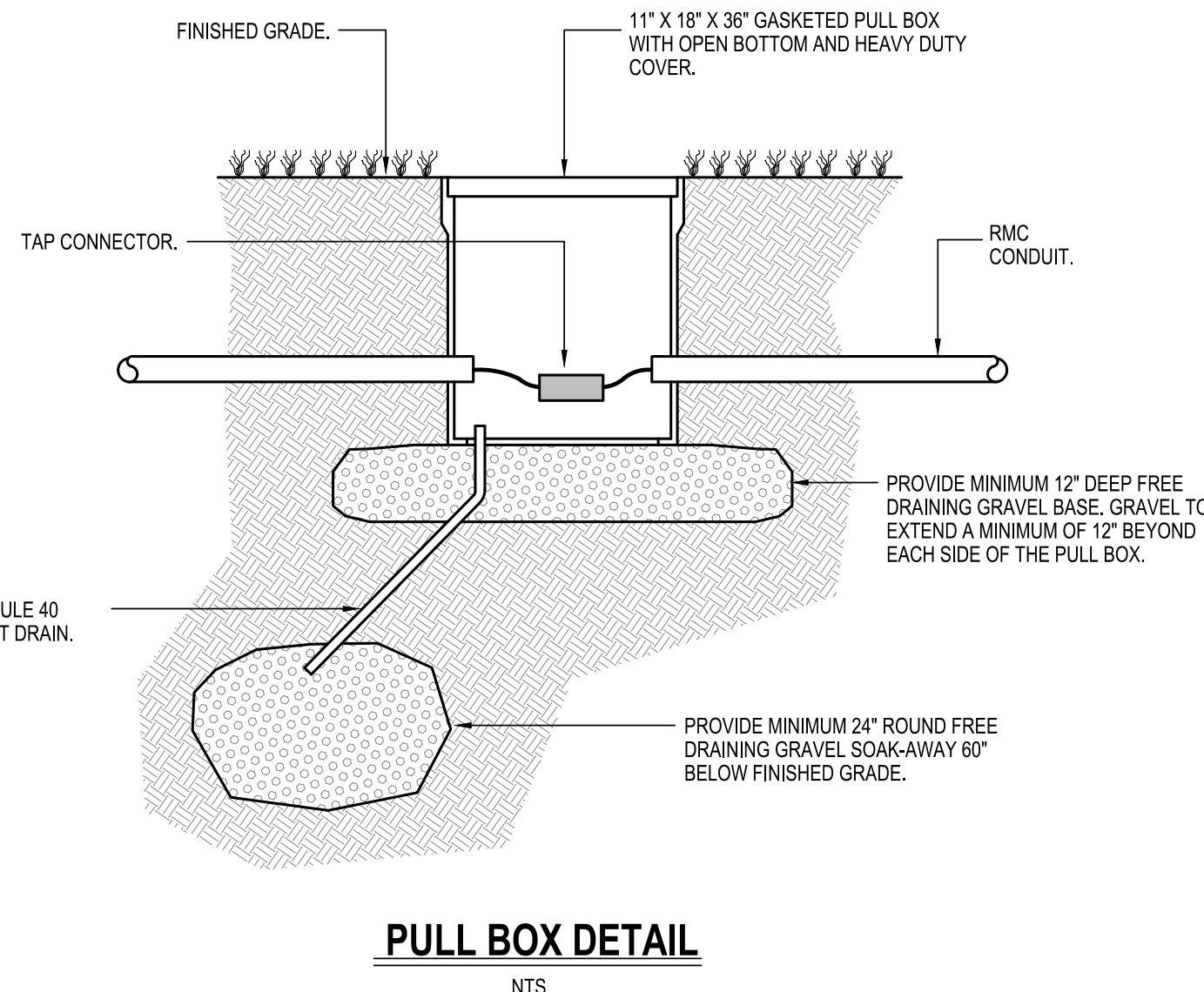
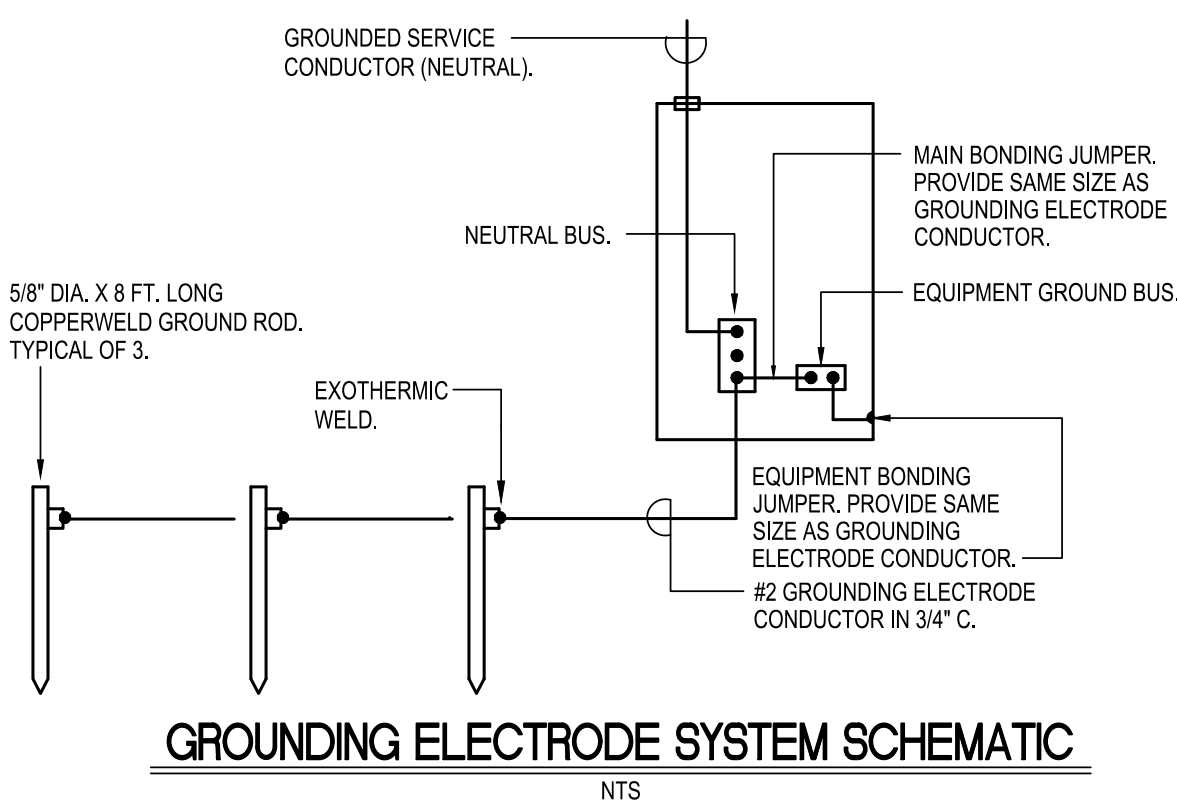
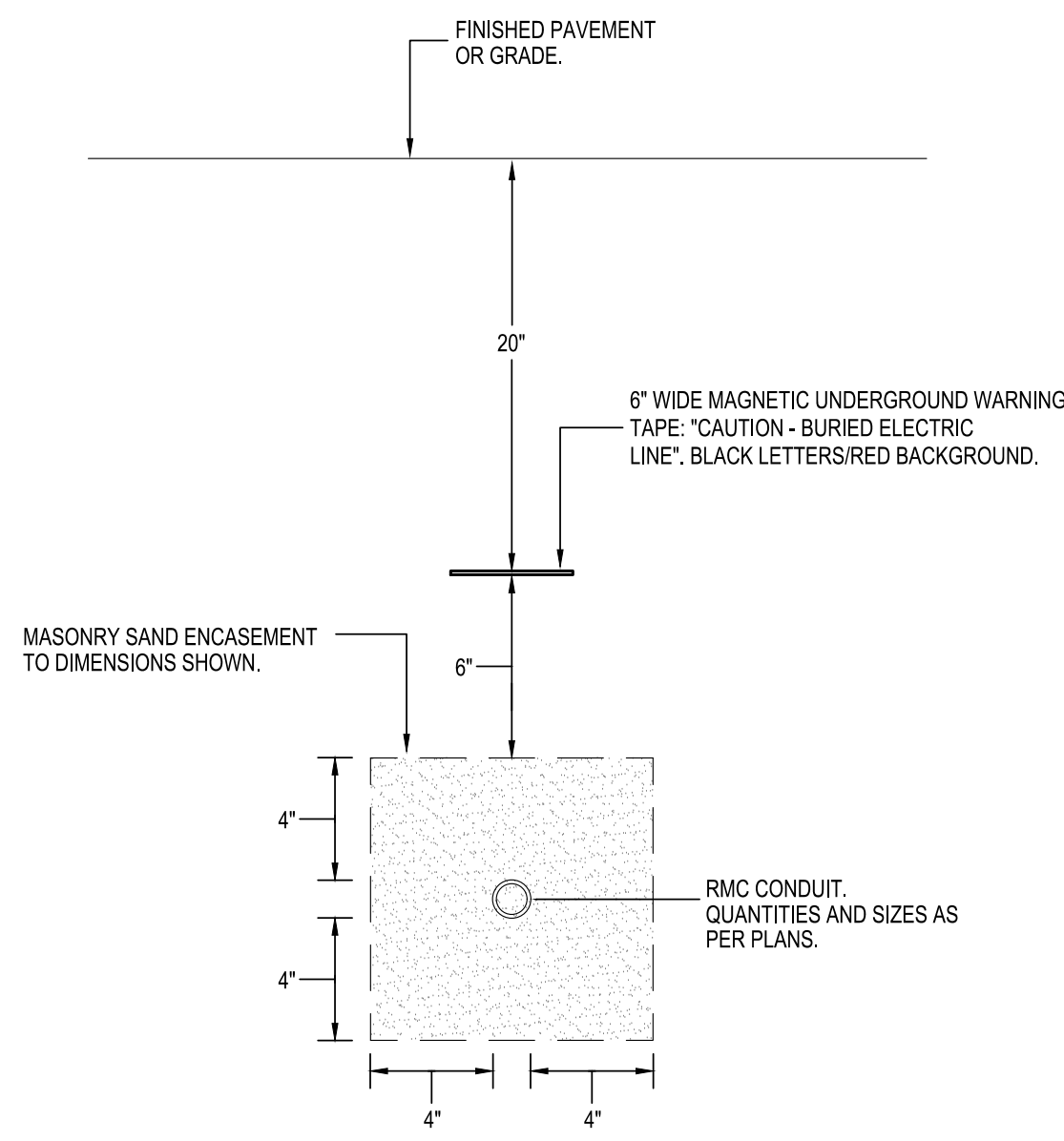
### LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION, MANUFACTURE, AND MODEL #	LAMP	FIXTURE WATTS	REMARKS
AA1	ORNAMENTAL GOOSENECK LED LIGHTING FIXTURE WITH INTEGRAL HOUSE SIDE SHIELD MOUNTED ON 12" DECORATIVE POLE LUMEC #DOS-24W16LED-4K-G3-E2F-UNV-HS-SP2-DMG-YM-BKTX MOUNTING ARM LUMEC #DOS-DBB POLE LUMEC #SM6-N-12-BA-BKTX	INCLUDED LED 4,000K CCT, 70 CRI 2,523 LUMENS	29	REFER TO DETAILS ON DRAWING 24
AA2	ORNAMENTAL GOOSENECK LED LIGHTING FIXTURE OPTIC ROTATED 90° WITH INTEGRAL HOUSE SIDE SHIELD MOUNTED ON 12" DECORATIVE POLE LUMEC #DOS-24W16LED-4K-G3-E2F-HS-SP2-DMG-YM-BKTX MOUNTING ARM LUMEC #DOS-DBB POLE LUMEC #SM6-N-12-BA-BKTX	INCLUDED LED 4,000K CCT, 70 CRI 2,496 LUMENS	29	REFER TO DETAILS ON DRAWING 24
AA3	BACK TO BACK ORNAMENTAL GOOSENECK LED LIGHTING FIXTURES WITH INTEGRAL HOUSE SIDE SHIELD MOUNTED ON 12" DECORATIVE POLE LUMEC 2X #DOS-24W16LED-4K-G3-E2F-HS-SP2-DMG-YM-BKTX MOUNTING ARM LUMEC DOS-DBB-2 POLE LUMEC #SM6-N-12-BA-BKTX	INCLUDED LED 4,000K CCT, 70 CRI 5,046 LUMENS	58	REFER TO DETAILS ON DRAWING 24
CC1	TWO (2) 22"W X 4" X 35.3" EXTENSION HIGH OUTPUT AREA LUMINAIRE, EACH WITH DIE-CAST ALUMINUM HOUSING (BLACK FINISH), WEATHERTIGHT LED DRIVER COMPARTMENT, HIGH-PERFORMANCE HEAT SINK, ADJUSTABLE ARM MOUNT, ASYMMETRIC TYPE IV MEDIUM OPTICS, 0-10V DIMMING LED DRIVER (120V), ANSI C136-41 7-FPN RECEPTACLE, AND TWIST LOCK LIGHTING CONTROLLER. PROVIDE WITH 20" HIGH, 5" SHAFT STRAIGHT SQUARE STEEL POLE WITH 180° STEEL BRACKET MOUNT. (2) CREE #OSQL-C-40L-60K7-4M-UL-NM-BK-20K-R EACH WITH ADJUSTABLE ARM MOUNT #OSQ-HO-AA, AND TWIST LOCK LIGHTING CONTROLLER #TL7-B2. PROVIDE WITH POLE #SSS-5-7-20-CW-BS-OT-N-BK, STEEL BRACKET #PB-2ASBK, AND ANCHOR BOLTS #SSS-5-AB-1-36.	INCLUDED LED 5,000K CCT, 70 CRI 3,356 LUMENS	472	REFER TO DETAILS ON DRAWING 24
DD1	GROUND MOUNTED SIGN LIGHT WITH DIE-CAST ALUMINUM HOUSING, GASKETED CAST ALUMINUM SHROUD, FROSTED LENS, BLACK FINISH HADCO #WAM1D-F-G2-B	INCLUDED LED 4,000K CCT, 70 CRI 760 LUMENS	10.6	REFER TO DETAILS ON DRAWING 24
EE1	23 3/8" X 15" X 4 1/2" POLE MOUNT AREA LIGHT WITH DIE-CAST ALUMINUM HOUSING, POLYCARBONATE LENS, VACUUM-METALIZED SPECULAR REFLECTOR, HIGH TEMPERATURE SILICONE GASKETING, TYPE 3 DISTRIBUTION, FIXED OUTPUT LED DRIVER (208V), AND HIGH DURABILITY BRONZE FINISH. RAB #ALED-3T-150-208V.	INCLUDED LED 5,000K CCT, 70 CRI 10,157 LUMENS	78	REFER TO DETAILS ON DRAWING 24

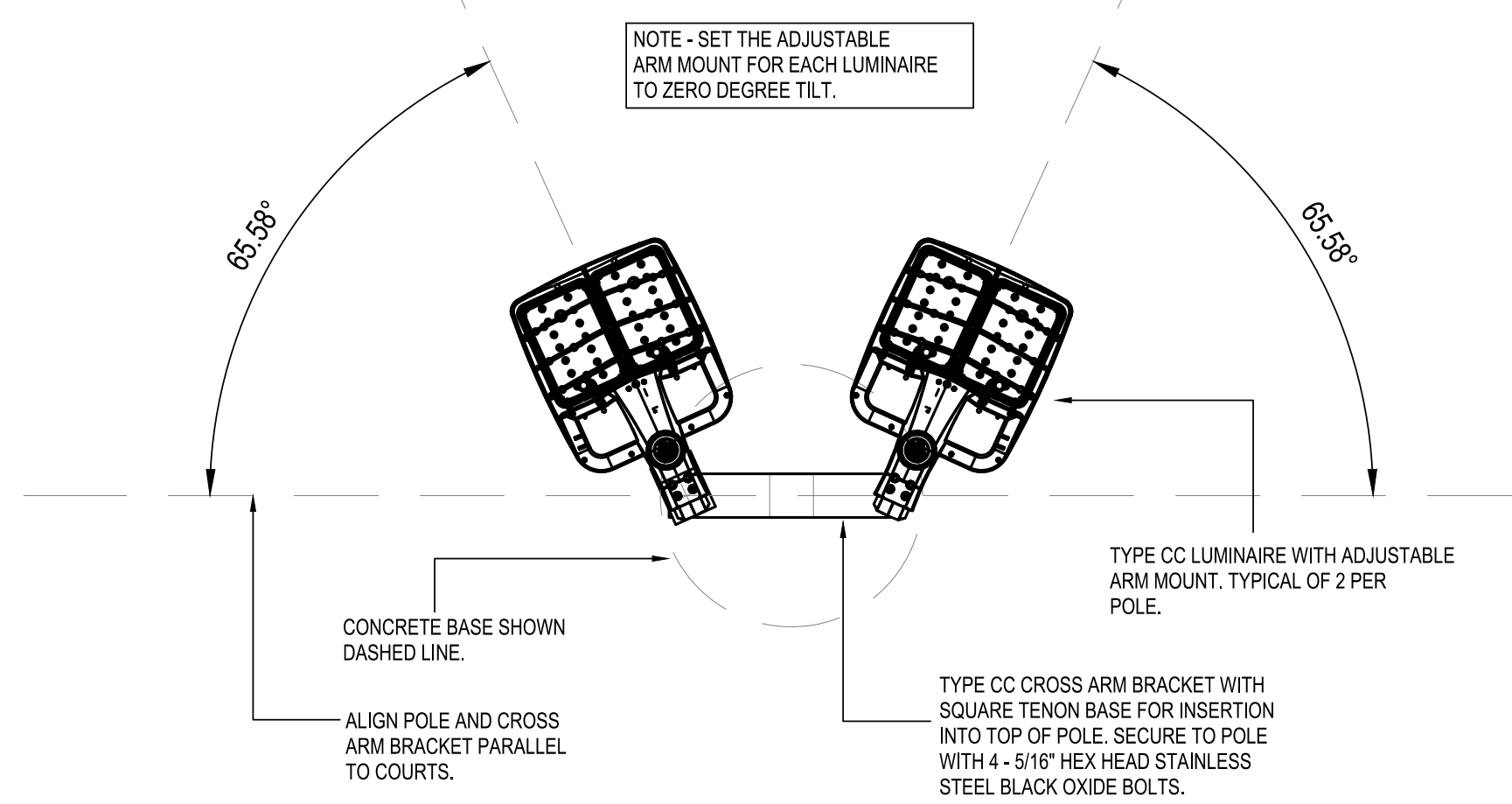
PANEL #SL1 - CUTLER-HAMMER PANELBOARD PRL3A, SURFACE, 120/240V, 1-PHASE, 3 WIRE, 200 AMP MAIN CB, 65K A.I.C. MIN.

CKT	TRIP	POLE	REMARKS	CKT	TRIP	POLE	REMARKS
1	20	1	CONTRACTOR COIL	2	20	2	PATHWAY LIGHTING
3	20	1	PANEL RECEPTACLE	4	20	2	PLAY GROUND LIGHTING
5	20	1	ENCLOSURE HEATER	6	20	2	POCKET PARK LIGHTING
7	20	1	ENCLOSURE LIGHT	8	20	2	POCKET PARK LIGHTING
9	20	1	TREE LIGHT REC	10	20	2	POCKET PARK LIGHTING
11	20	1	TREE LIGHT REC	12	20	1	SPARE
13	20	1	BOLLARD REC	14	20	2	POCKET PARK LIGHTING
15	20	1	SIGN LIGHTS	16	20	2	POCKET PARK LIGHTING
17	20	1	POCKET PARK REC	18	20	1	BASKETBALL COURT LTS
19	20	1	POCKET PARK REC	20	20	1	SPARE
21	20	1	POCKET PARK REC	22	20	1	SPARE
23	20	1	POCKET PARK REC	24	20	1	SPARE
25	20	1	SPARE	26	20	1	SPARE
27	-	-	BLANK FOR FUTURE USE	28	-	-	BLANK FOR FUTURE USE
29	-	-	BLANK FOR FUTURE USE	30	-	-	BLANK FOR FUTURE USE
31	-	-	BLANK FOR FUTURE USE	32	-	-	BLANK FOR FUTURE USE
33	-	-	BLANK FOR FUTURE USE	34	-	-	BLANK FOR FUTURE USE
35	-	-	BLANK FOR FUTURE USE	36	-	-	BLANK FOR FUTURE USE
37	-	-	BLANK FOR FUTURE USE	38	-	-	BLANK FOR FUTURE USE
39	-	-	BLANK FOR FUTURE USE	40	-	-	BLANK FOR FUTURE USE

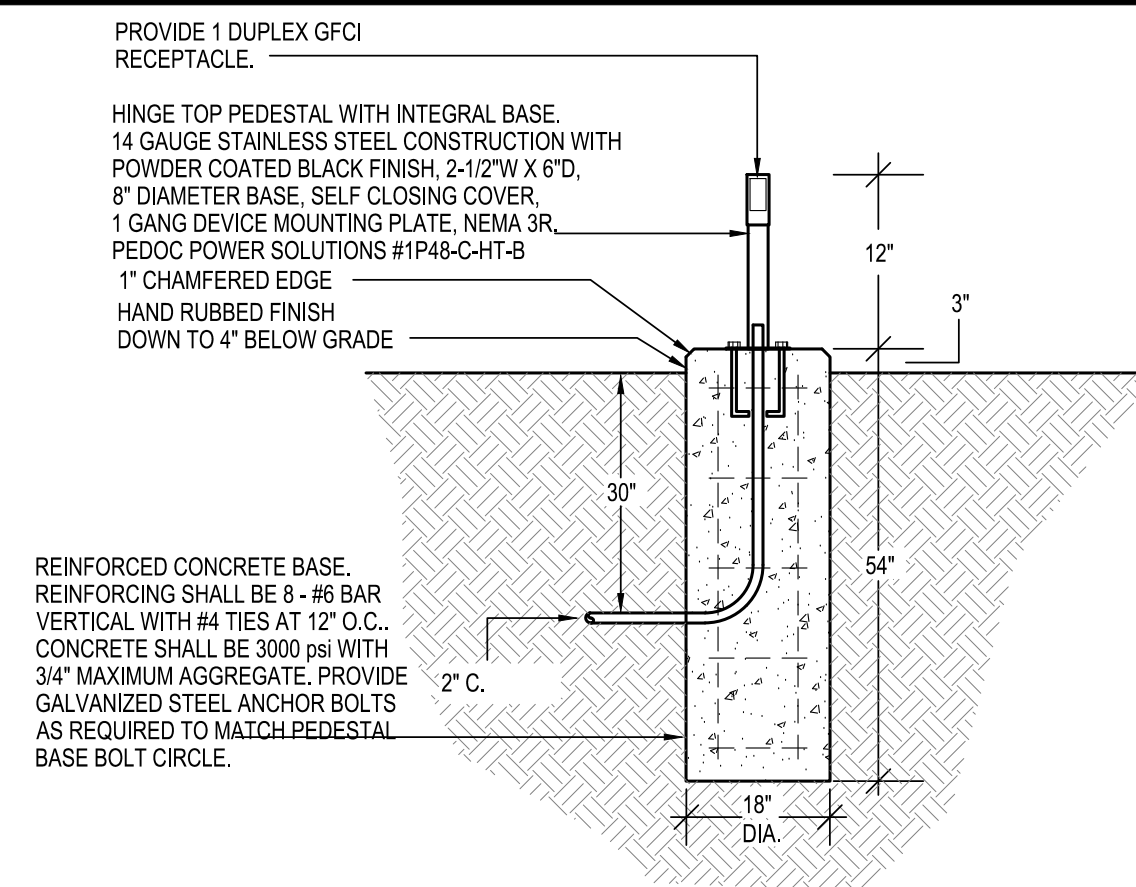
- NOTES:
- PROVIDE WITH SILVER PLATE COPPER BUS BARS AND COPPER GROUND BAR.
  - PROVIDE WITH BLACK FACE, WHITE CORE ENGRAVED NAMEPLATE.
  - PROVIDE WITH TYPE WRITTEN CIRCUIT DIRECTORY REPRESENTING CIRCUITS AS ACTUALLY CONNECTED TO PANEL.
  - PROVIDE WITH INTEGRAL 100KA PER PHASE SURGE SUPPRESSOR.
  - PROVIDE WITH BOLT-ON TYPE CIRCUIT BREAKERS.



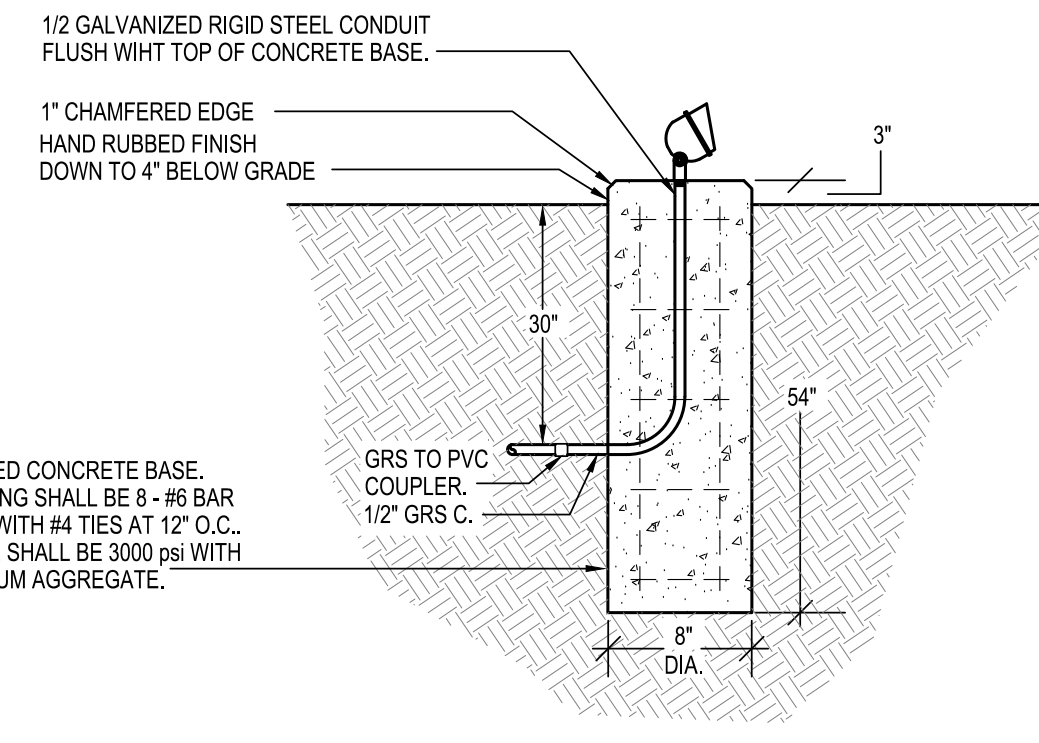
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 Consulting Engineers  
 166 Main Street  
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 Fax: (860) 321-0770  
 www.behns.com  
 TITLE  
**ELECTRICAL SYMBOLS, SCHEDULE, NOTES & DETAILS**  
 DATE: NOVEMBER 8, 2024  
 DWG. NO.  
**17 of 22**



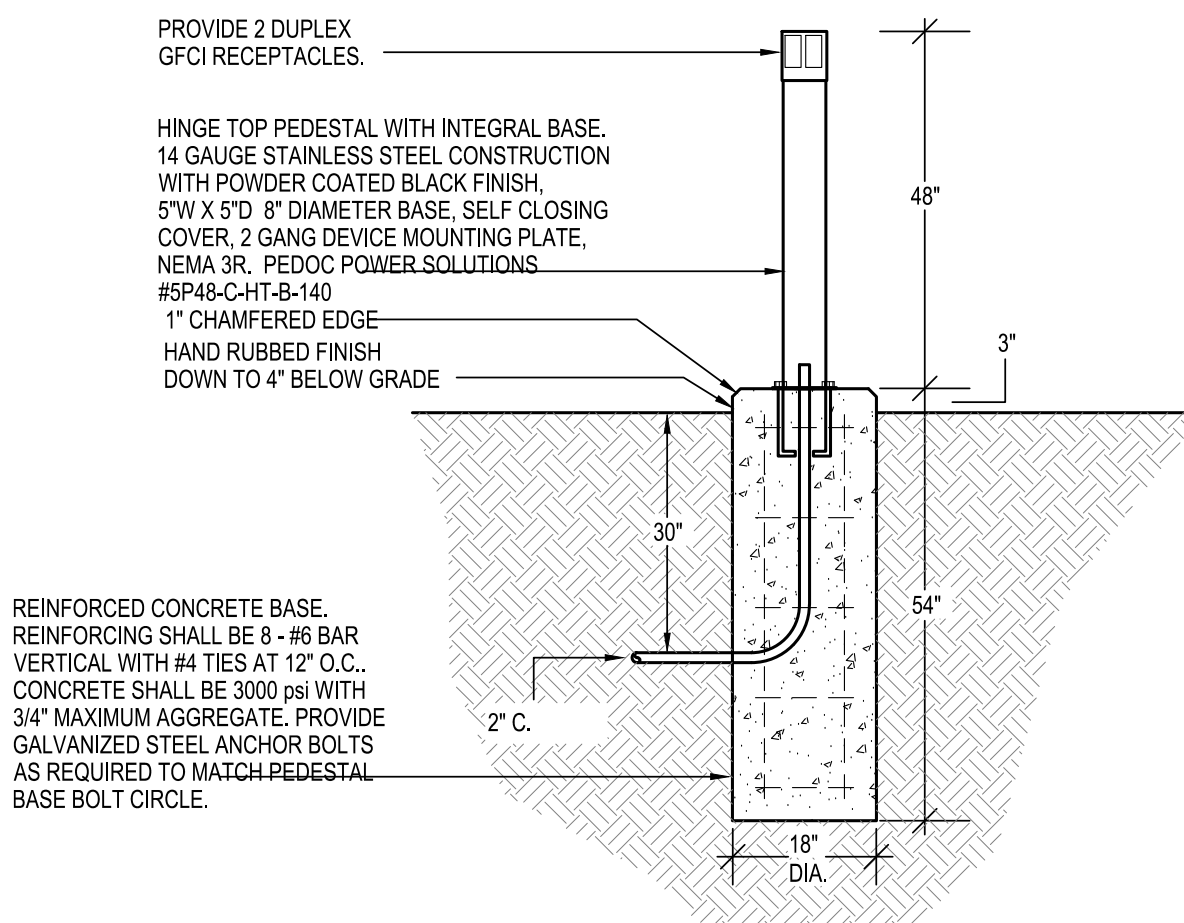
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NTS



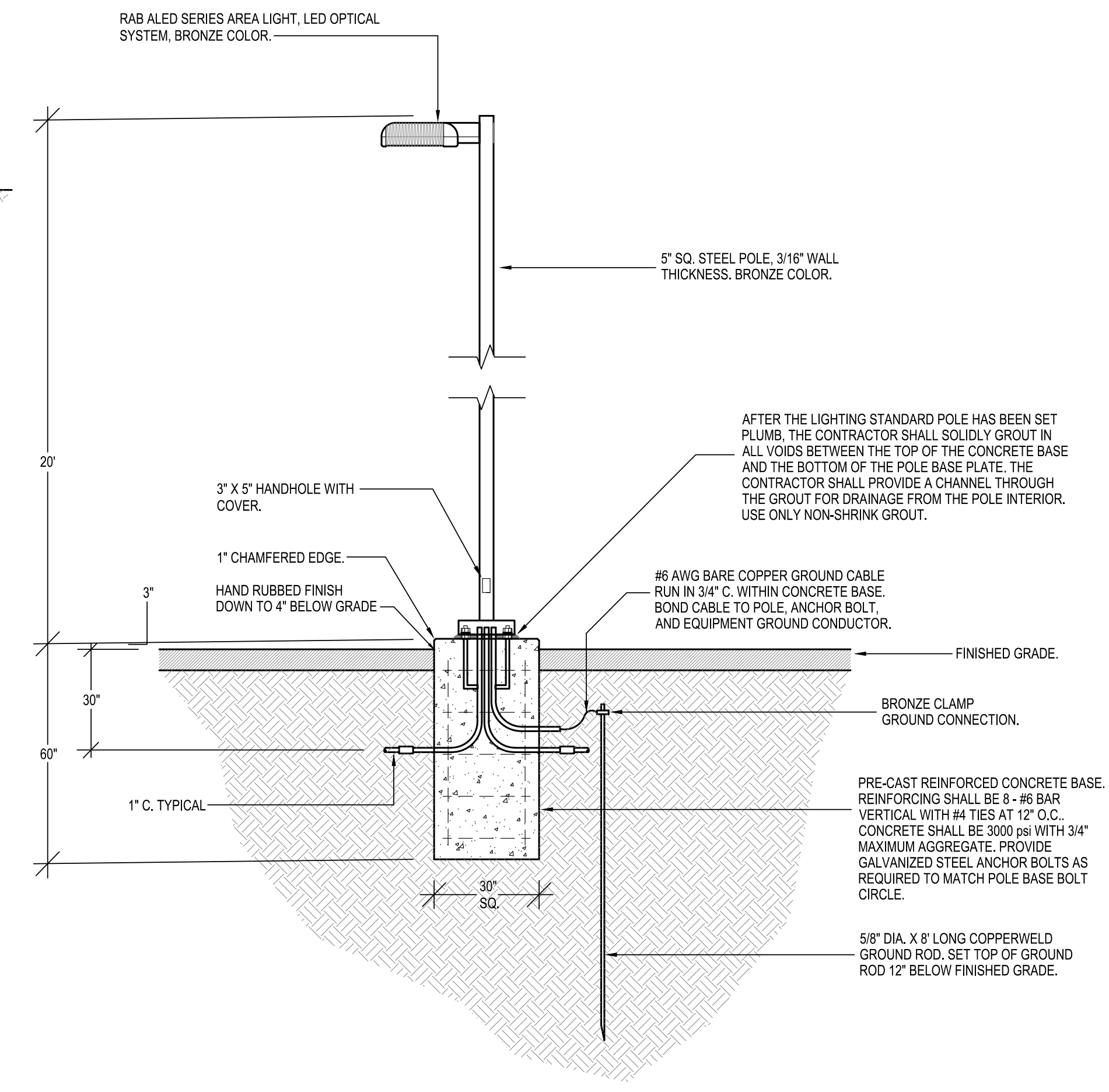
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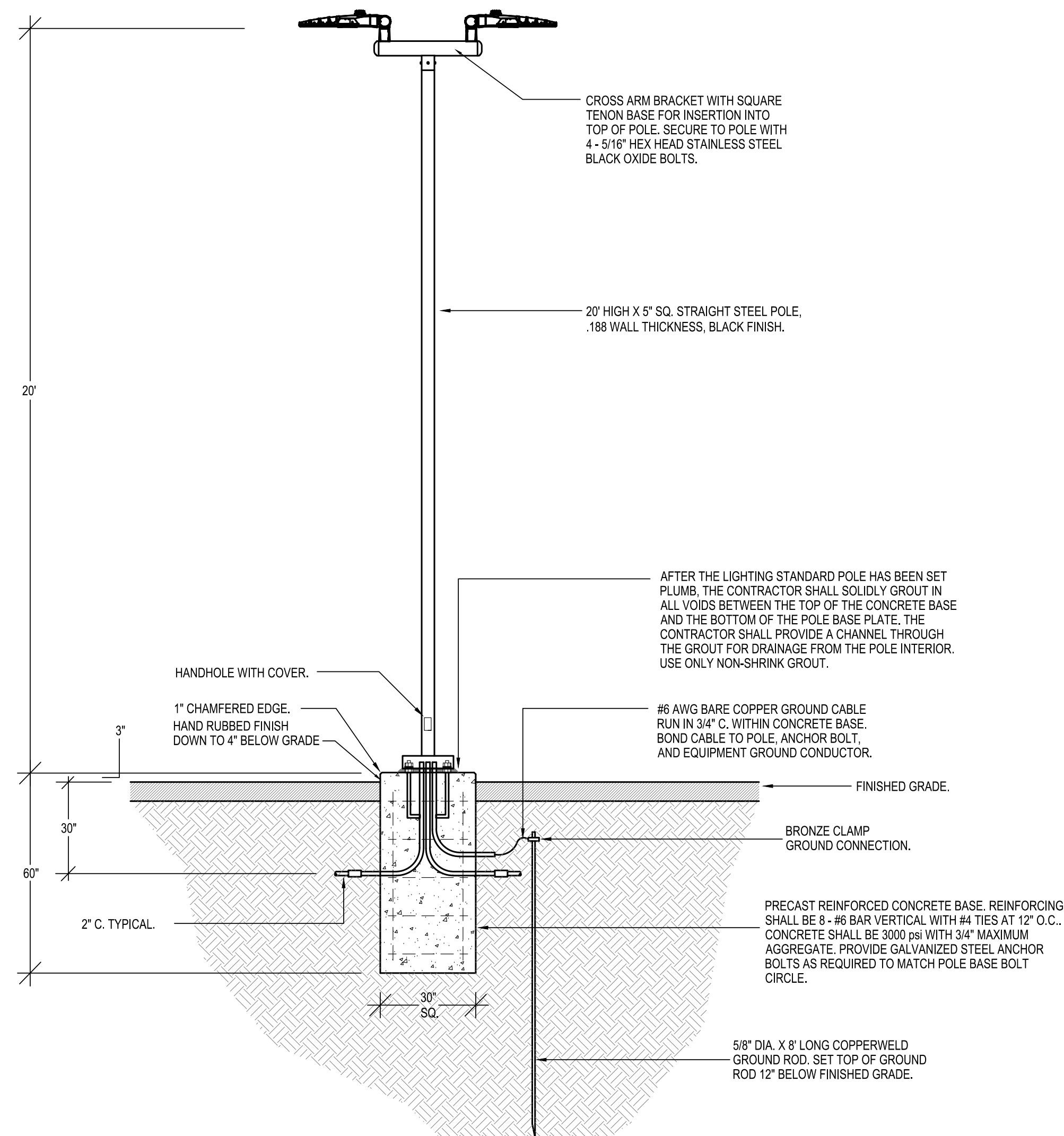
**SIGN LIGHT DETAIL**  
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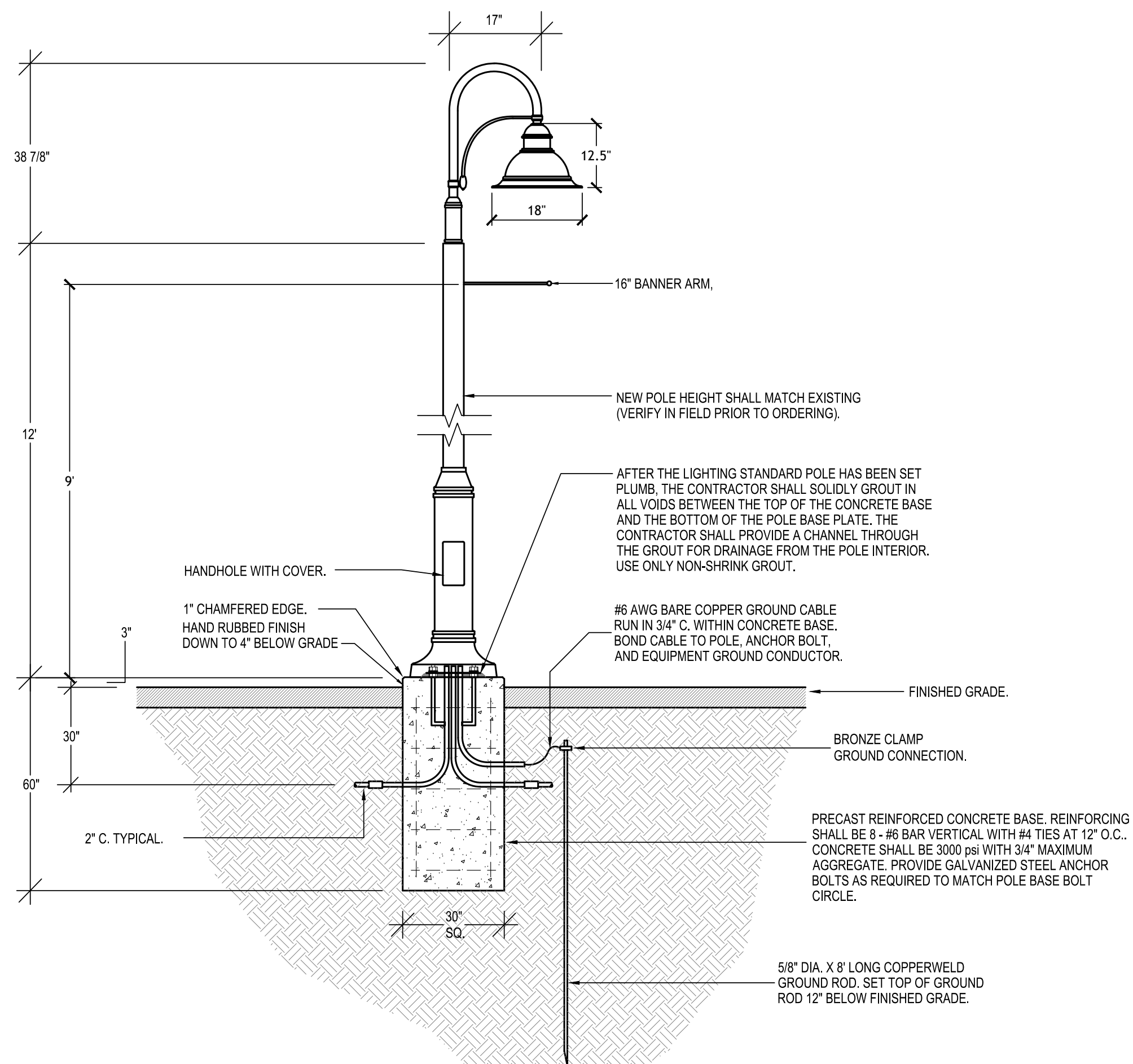
**SITE RECEPTACLE DETAIL**  
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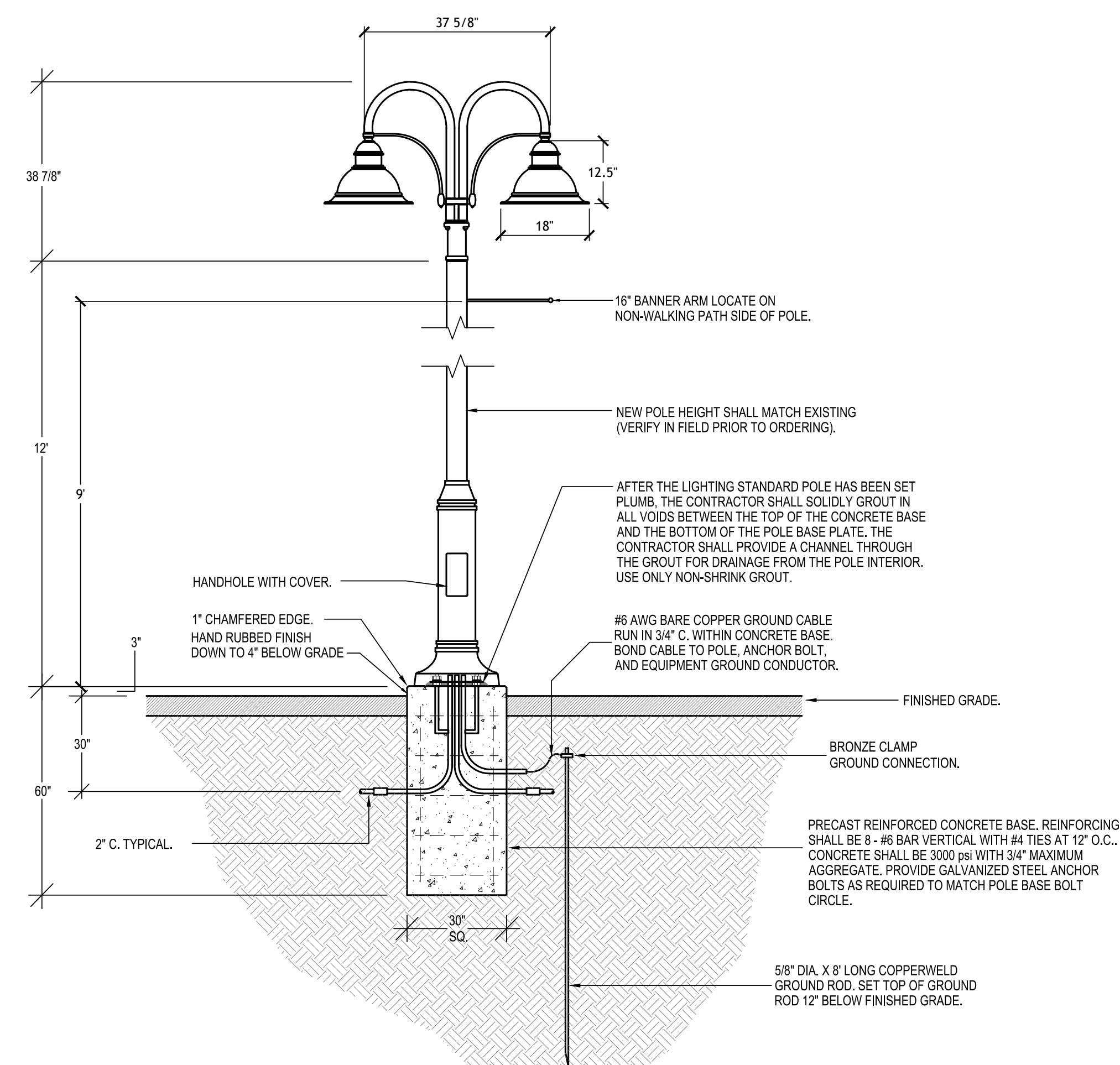
**SITE LIGHTING STANDARD DETAIL - TYPE EE1**  
NTS



**BASKETBALL LIGHTING STANDARD DETAIL**  
NTS



**GOOSENECK LIGHTING STANDARD DETAIL**  
NTS



**DUAL GOOSENECK LIGHTING STANDARD DETAIL**  
NTS

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TITLE  
**ELECTRICAL  
SITE DETAILS**

DATE:  
NOVEMBER 8, 2024

DWG. NO.

18 of 22



TOWN OF MANCHESTER  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
494 MAIN STREET - P.O. BOX 191  
MANCHESTER, CT 06045-0191

LEGEND

- - -	WETLAND BOUNDARY	☆	LIGHT POLE
- - -	RETAINING WALL	⊗	CONIFEROUS TREE
- - -	GUIDE RAIL	⊙	DECIDUOUS TREE
⊖	STOCKADE FENCE	⊕	SANITARY MANHOLE
⊖	WIRE FENCE	⊕	DRAINAGE MANHOLE
⊖	CHAIN LINK FENCE	⊕	CATCH BASIN
- - -	PROPERTY LINE	⊕	CULVERT END
- - -	RAILROAD TRACKS	⊕	HYDRANT
⊖	SILT FENCE	⊕	CURB STOP
⊖	CONCRETE MONUMENT	⊕	WATER VALVE
⊖	GRANITE MONUMENT	⊕	BUTTERFLY VALVE
⊖	IRON PIPE	⊕	BLOW OFF
⊖	IRON ROD	⊕	SIGN
⊖	CONTROL POINT	⊕	DOUBLE POST SIGN
⊖	DRILL HOLE	⊕	MAIL BOX
⊖	UTILITY POLE	⊕	BOLLARD
⊖	UTILITY POLE WITH LIGHT	⊕	CONTROLLER CABINET
⊖	ELECTRIC BOX	⊕	GAS GATE
⊖	WETLAND FLAG	⊕	TELEPHONE BOX
⊖		⊕	CATV TUBE

PROJECT NUMBER  
**2023111**

FILENAME  
**2023111-PLAN.DWG**

NO.	DATE	FILE
-	11/08/24	FOR BIDDING

DRAWN BY: JL  
CHECKED BY: JL  
RELEASED BY: TB

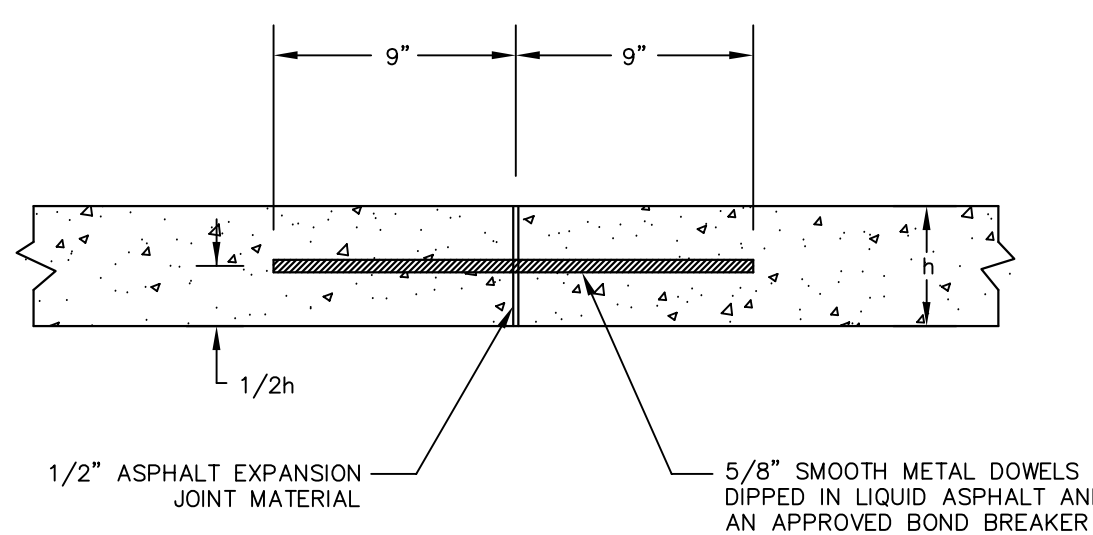
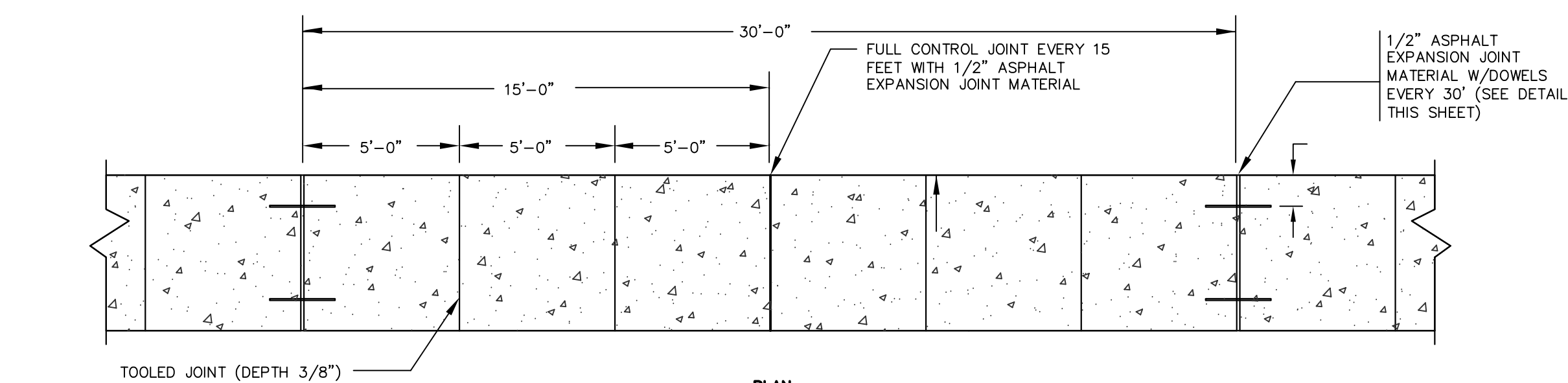
DATUM  
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION  
**SPRUCE STREET  
MANCHESTER, CT**

PROJECT TITLE  
**STREETSCAPE IMPROVEMENTS  
SPRUCE STREET AT  
NATHAN HALE SCHOOL**

SHEET TITLE  
**DETAILS**

SHEET NUMBER  
**19 of 22**

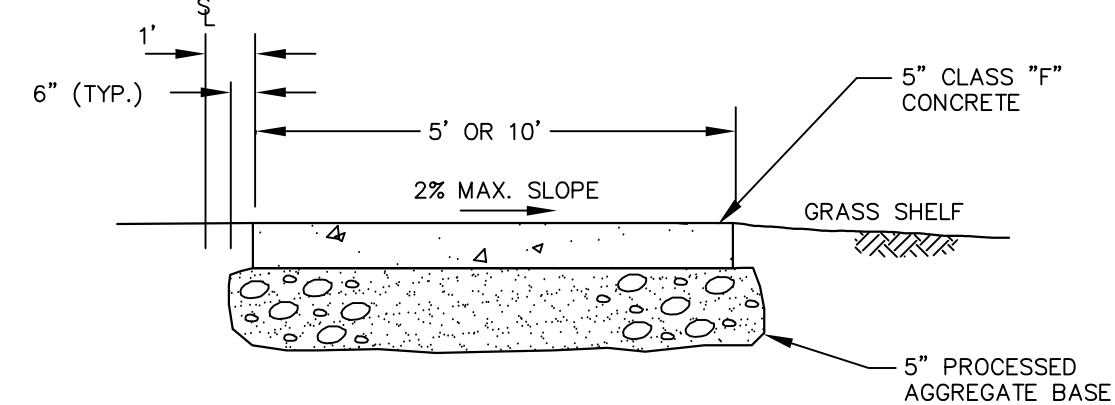


EXPANSION JOINT - DETAIL

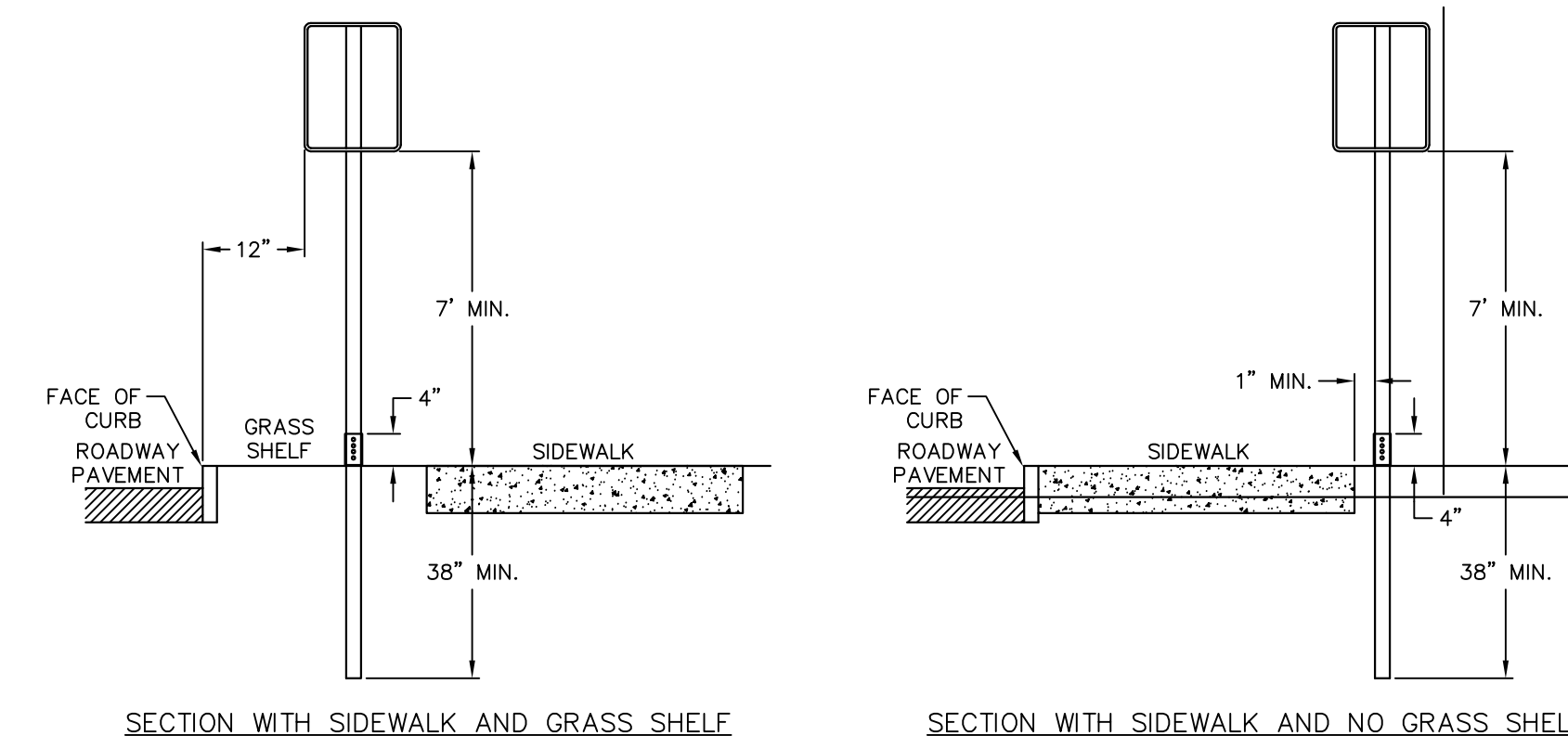
### 5" CONCRETE SIDEWALK

NOT TO SCALE

- NOTES:
- A MINIMUM 48" CLEAR WIDTH SHALL BE MAINTAINED BETWEEN THE EDGES OF THE SIDEWALK AND ANY OBSTRUCTIONS WITHIN THE SIDEWALK LIMITS.
  - AT THE END OF THE DAILY POUR OF CONCRETE, METAL DOWELS ARE TO BE INSERTED IN THE LAST SLAB FOR THE EXTENSION OF THE SIDEWALK.
  - INSTALL APPROVED BOND BREAKER BETWEEN GRANITE CURB AND SIDEWALK.
  - FOR 10' WIDE SIDEWALKS, USE A FULL CONTROL JOINT AT 5' LONGITUDINALLY.



SECTION



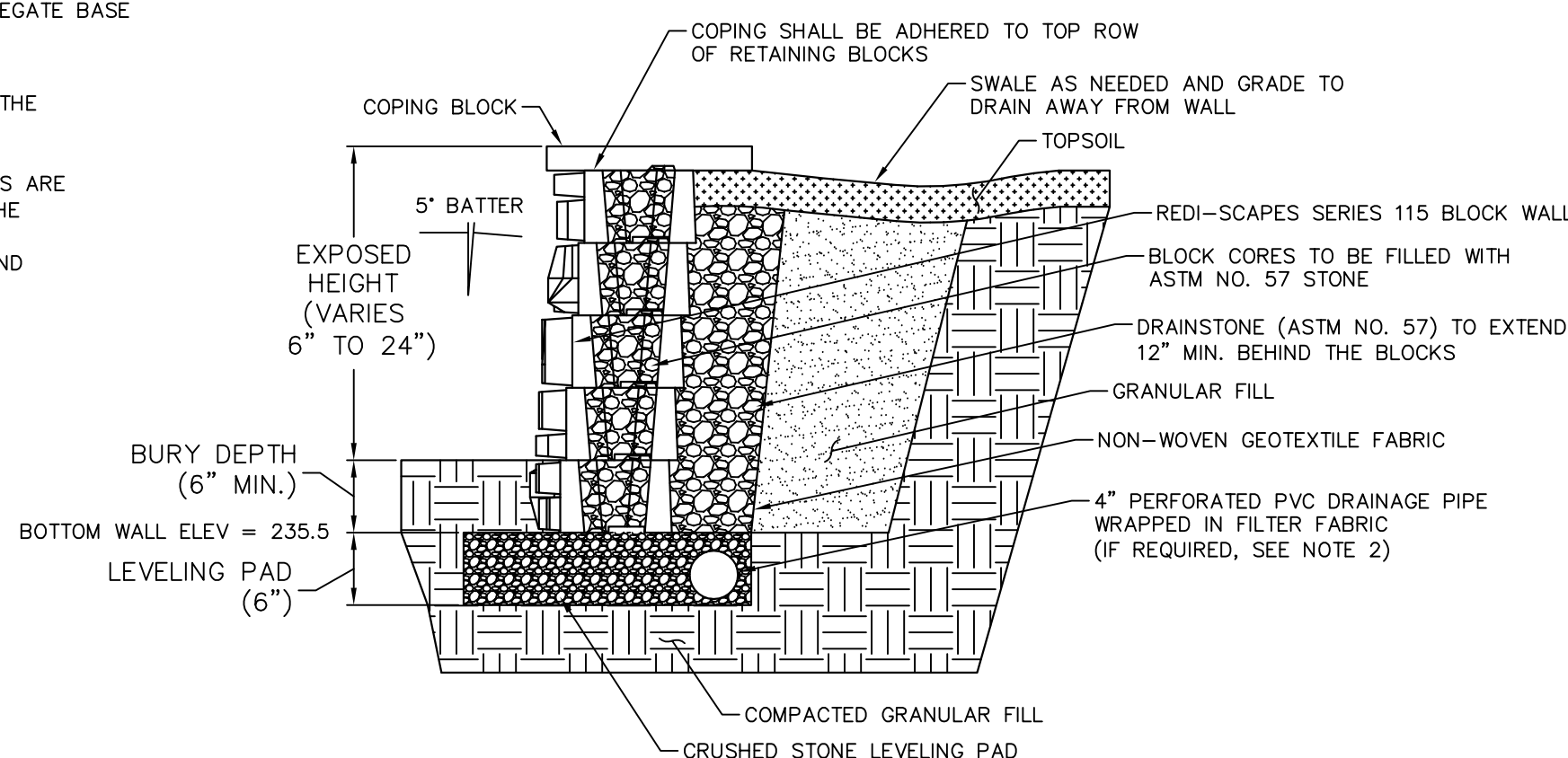
SECTION WITH SIDEWALK AND GRASS SHELF

SECTION WITH SIDEWALK AND NO GRASS SHELF

- NOTES:
- SUPPORTS SHALL BE METAL GALVANIZED STEEL POSTS WITH BREAKAWAY COUPLING SYSTEM.
  - WHERE POSTS CANNOT BE INSTALLED BEHIND SIDEWALK, THEY SHALL BE INSTALLED WITH THE EDGE OF THE SIGN 12" FROM FACE OF CURB.

### SIGN INSTALLATION - TYPICAL

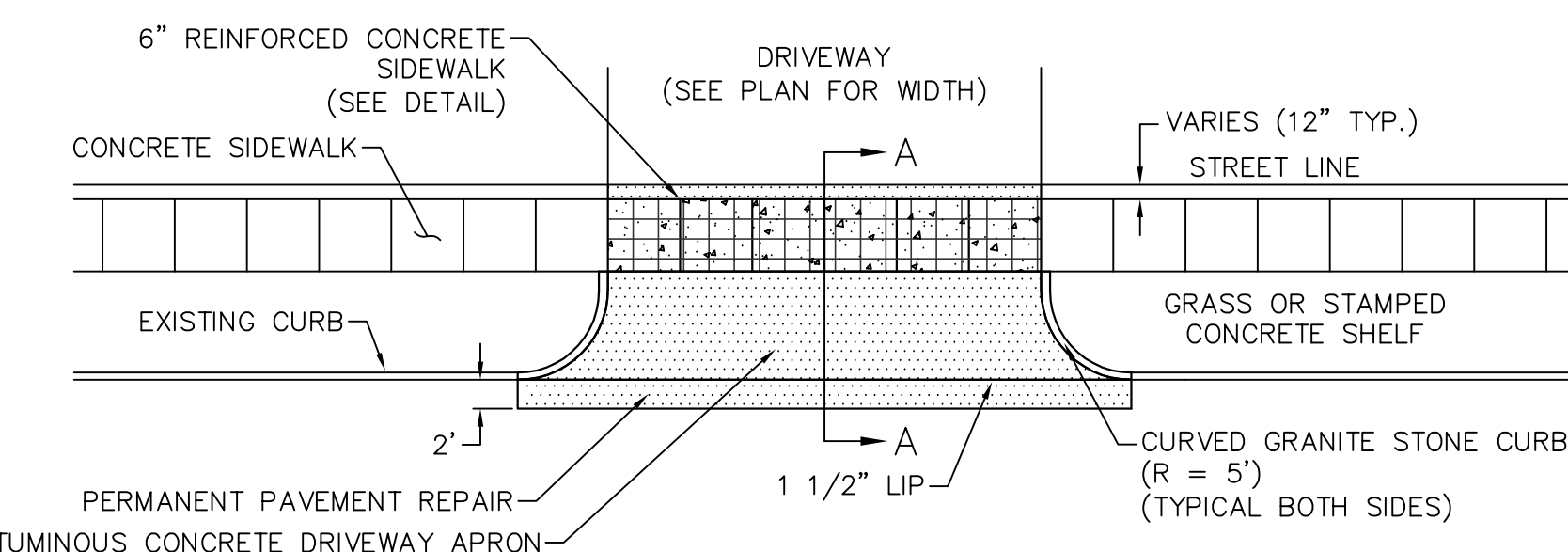
NOT TO SCALE



- NOTES:
- SEGMENTAL BLOCK WALLS AND ALL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER.
  - GEOTRID REINFORCING FABRIC AND DRAINAGE PIPE SHALL BE INSTALLED IF REQUIRED BASED ON SITE CONDITIONS IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

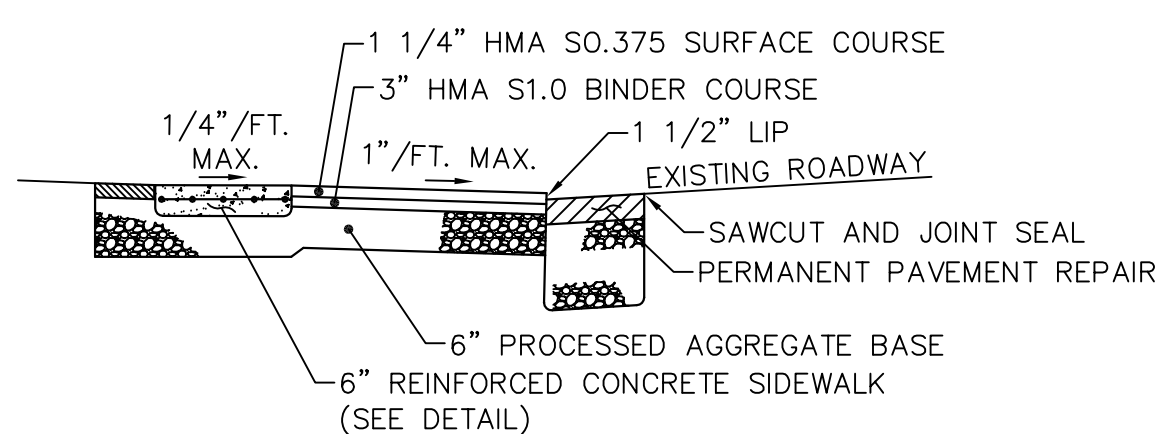
### SEGMENTAL BLOCK RETAINING WALL

NOT TO SCALE



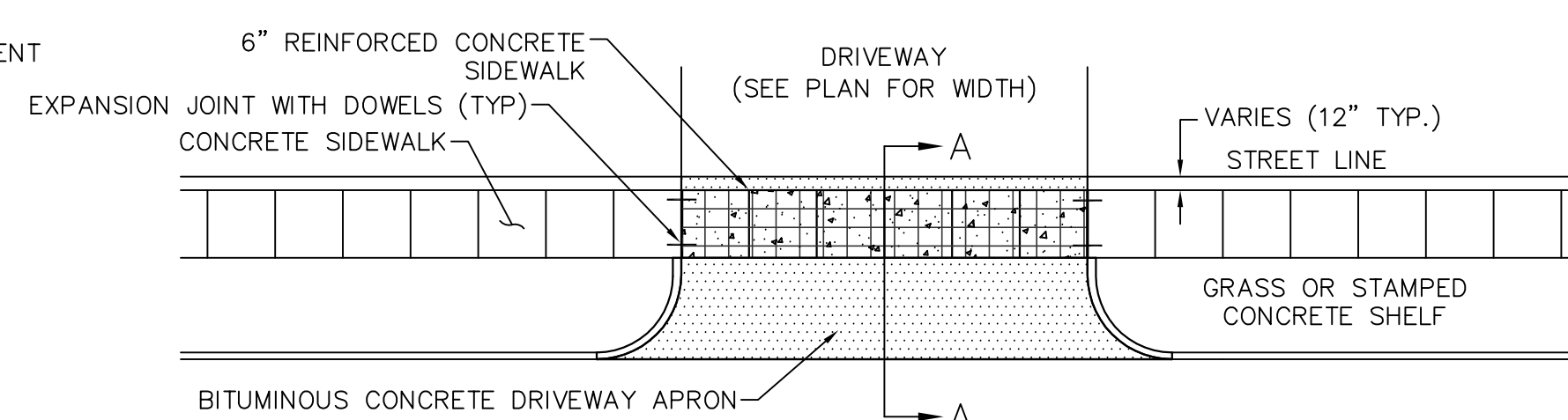
PLAN

- NOTE:
- SEE RESPECTIVE DETAILS FOR CONCRETE SIDEWALK, GRANITE STONE CURB AND PERMANENT PAVEMENT REPAIR

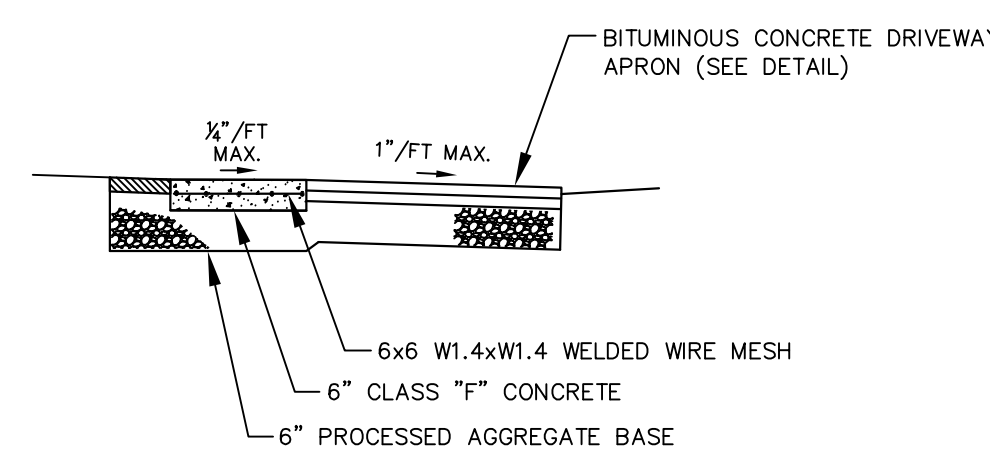


SECTION A-A

### BITUMINOUS CONCRETE DRIVEWAY APRON



PLAN

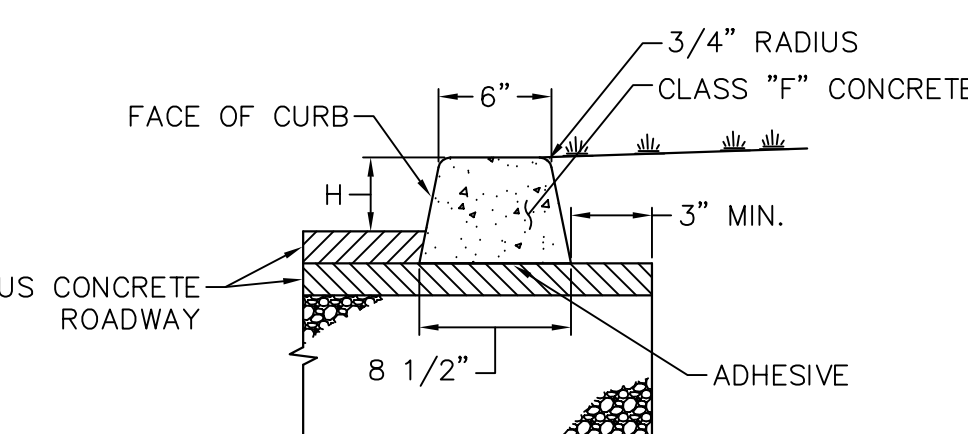


SECTION A-A

### 6" REINFORCED CONCRETE SIDEWALK (ACROSS DRIVEWAYS)

NOT TO SCALE

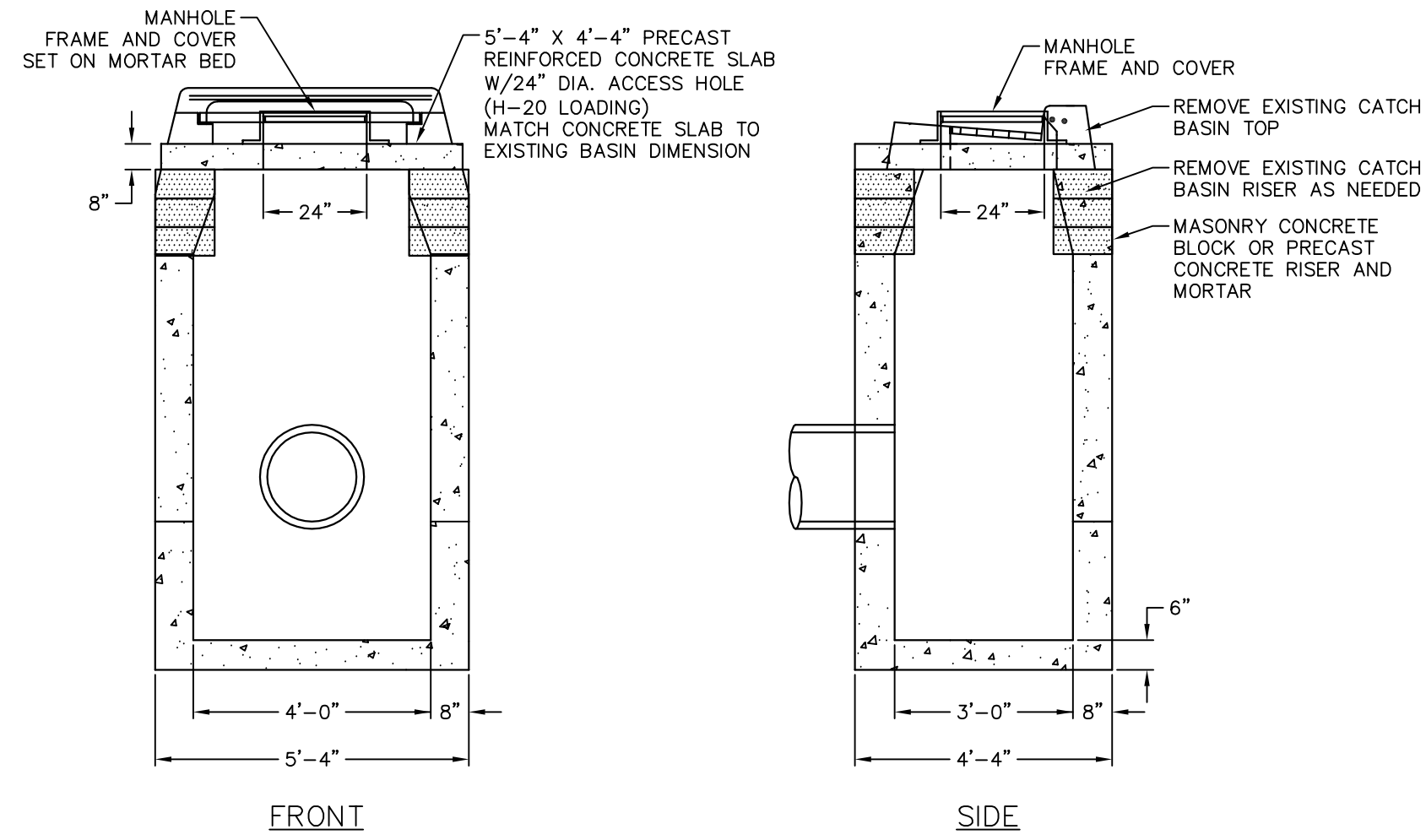
- NOTES:
- A CONCRETE DRIVEWAY APRON THAT EXTENDS FROM THE BACK OF SIDEWALK TO THE ROAD CUTTER SHALL BE INSTALLED WHERE SHELF WIDTH IS LESS THAN 3 FT. SEE APPROPRIATE DETAIL.
  - SEE RESPECTIVE DETAILS FOR CONCRETE SIDEWALK AND CURB.
  - ALL DRIVEWAY RECONSTRUCTION INCLUDING SAWCUT AND JOINT SEAL SHALL BE PAID FOR AS "BITUMINOUS CONCRETE DRIVEWAY".



- NOTE:
- CURB HEIGHT (H) SHALL BE AS SPECIFIED ON THE PLANS.

### EXTRUDED CONCRETE CURB

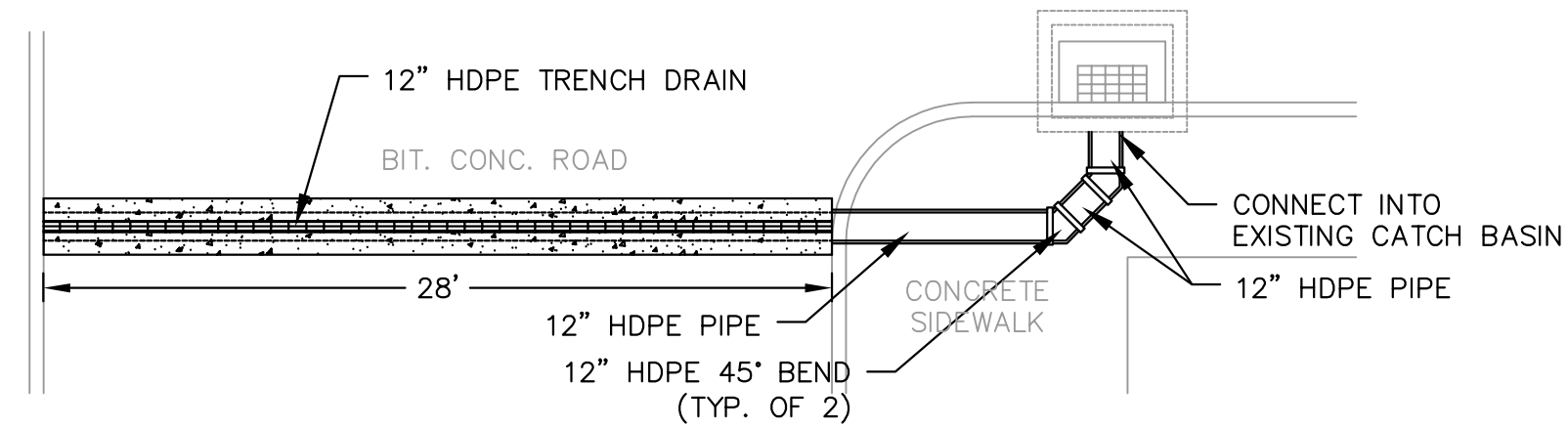
NOT TO SCALE



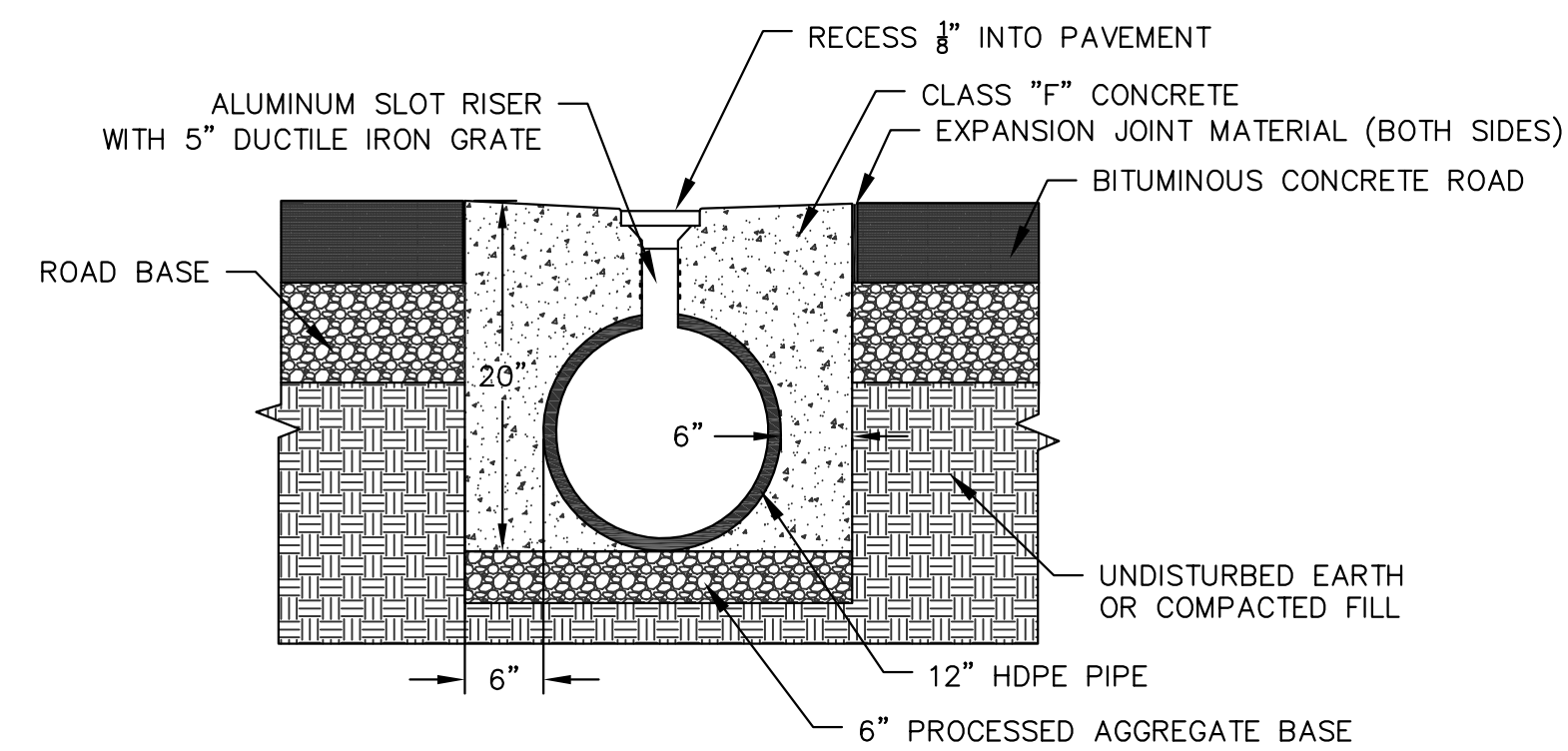
NOTES:  
 1. USE CONCRETE BLOCKS OR PRECAST RISER AND THE CONCRETE SLAB TO BRING THE MANHOLE COVER TO GRADE.  
 2. TYPE "C" CATCH BASIN TOP IS SHOWN; HOWEVER, DETAIL ALSO APPLIES TO TYPE "C-L" CATCH BASIN TOPS.

**CONVERT CATCH BASIN TO MANHOLE**

NOT TO SCALE



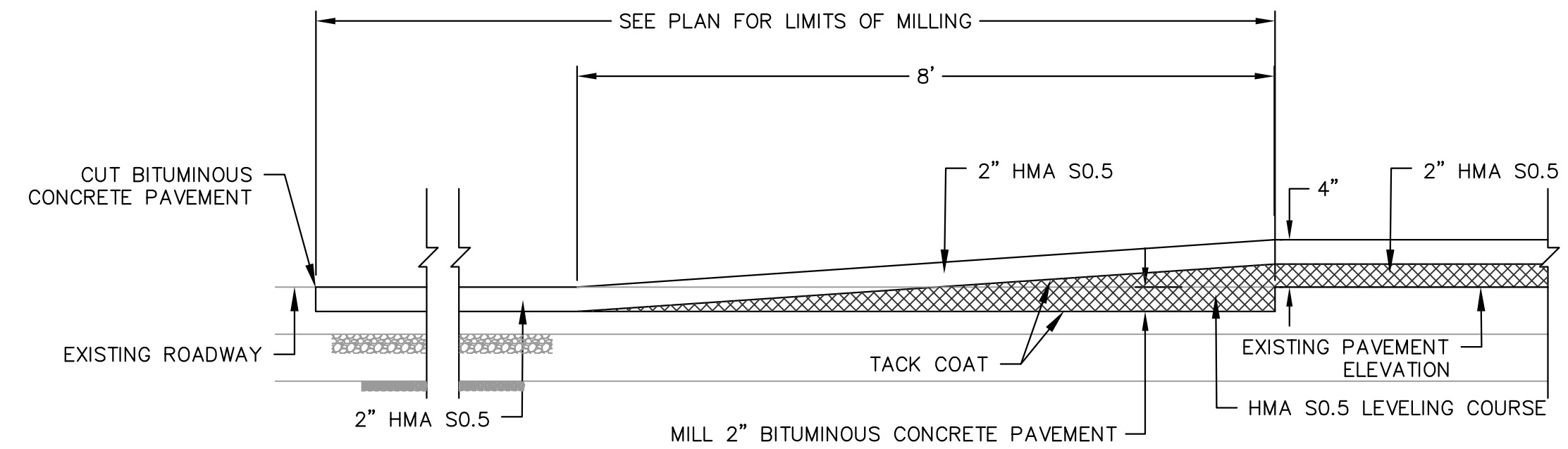
PLAN



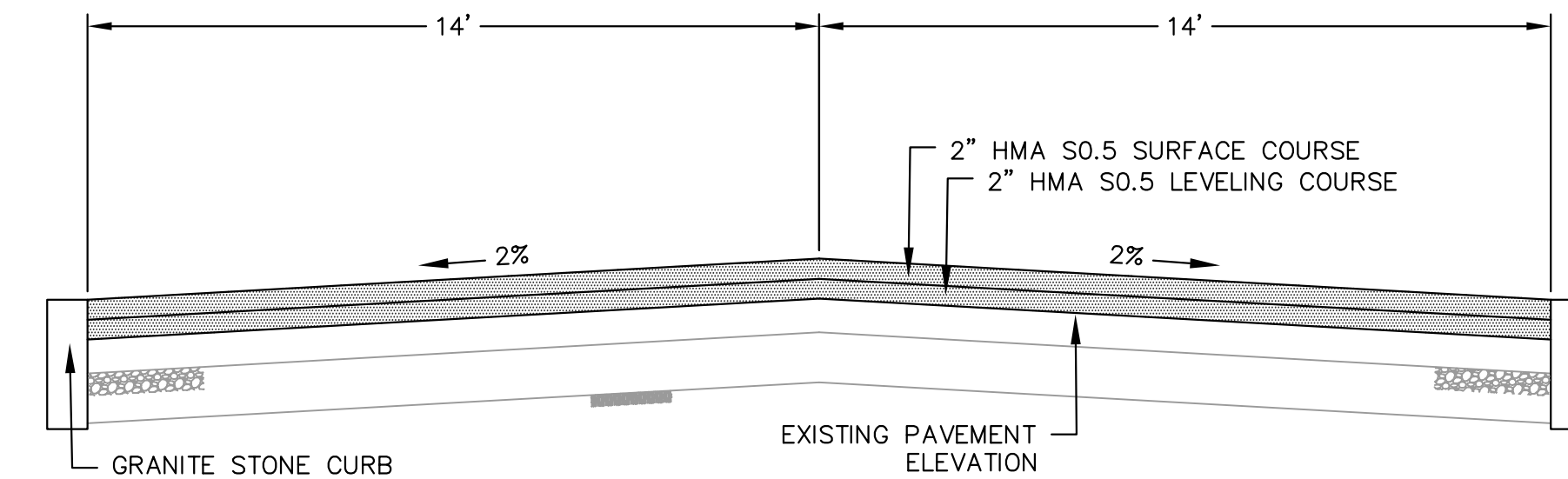
SECTION

**TRENCH DRAIN**

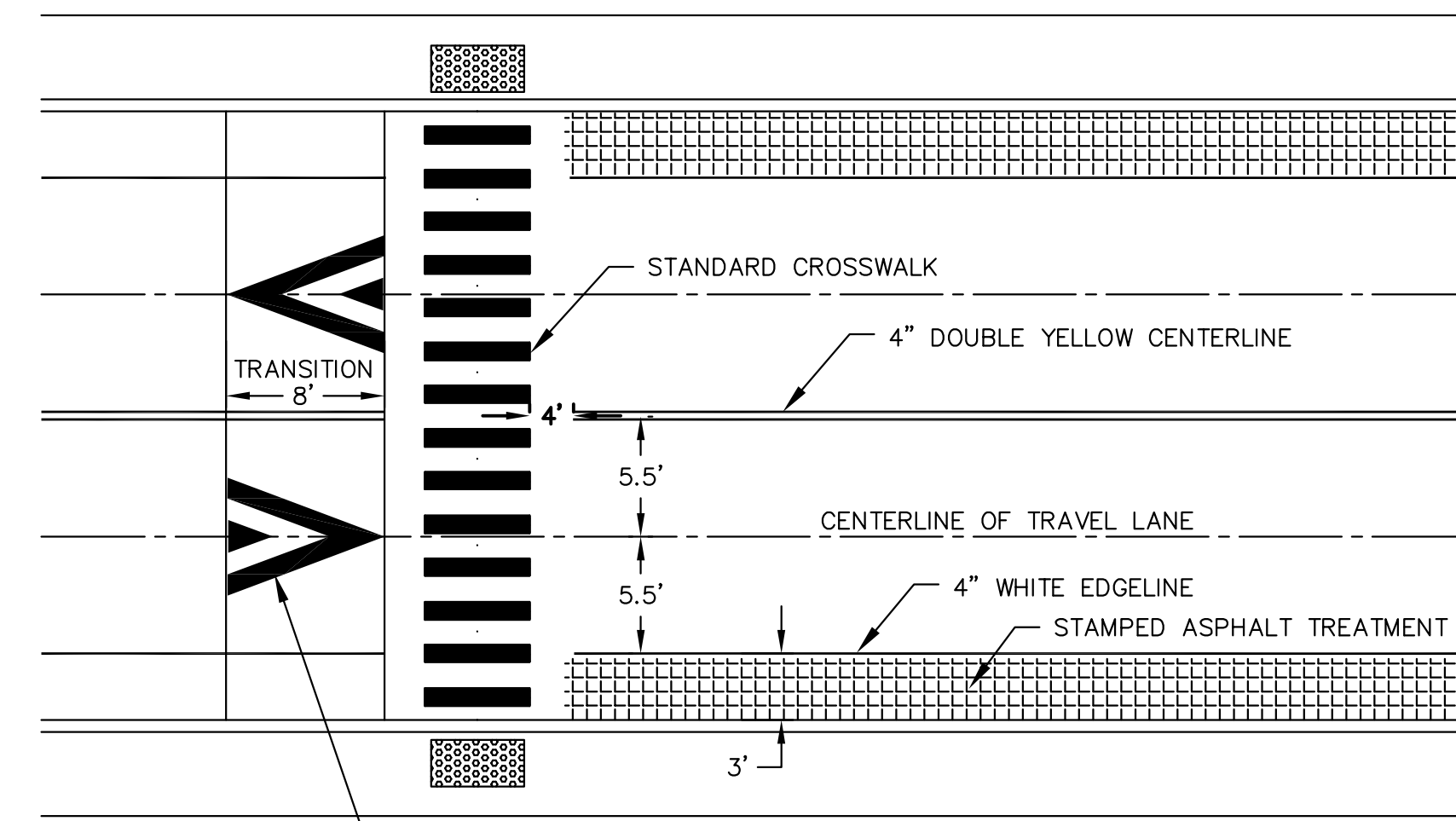
NOT TO SCALE



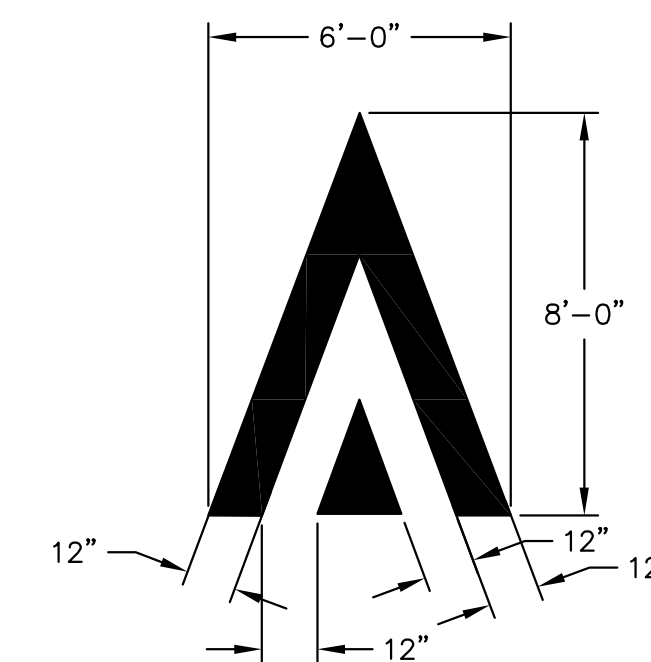
LONGITUDINAL TRANSITION AREA - HMA OVERLAY



TYPICAL SECTION - RAISED AREA



PLAN



APPROACH PAVEMENT MARKING DETAIL

**RAISED INTERSECTION**

NOT TO SCALE



TOWN OF MANCHESTER CONNECTICUT  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION  
 494 MAIN STREET - P.O. BOX 191  
 MANCHESTER, CT 06045-0191

LEGEND

—	WETLANDS BOUNDARY	☆	LIGHT POLE
—	RETAINING WALL	⊗	CONIFEROUS TREE
—	GUIDE RAIL	⊙	DECIDUOUS TREE
—	STONE WALL	⊕	SANITARY MANHOLE
—	STOCKADE FENCE	⊖	DRAINAGE MANHOLE
—	WIRE FENCE	⊗	CATCH BASIN
—	CHAIN LINK FENCE	⊙	CULVERT END
—	PROPERTY LINE	⊗	HYDRANT
—	RAILROAD TRACKS	⊙	CURB STOP
—	SILT FENCE	⊗	WATER VALVE
—	CONCRETE MONUMENT	⊙	BUTTERFLY VALVE
—	GRANITE MONUMENT	⊗	BLOW OFF
—	IRON PIPE	⊙	SIGN
—	IRON ROD	⊗	DOUBLE POST SIGN
—	CONTROL POINT	⊙	MAIL BOX
—	DRILL HOLE	⊗	BOLLARD
—	UTILITY POLE	⊙	CONTROLLER CABINET
—	UTILITY POLE WITH LIGHT	⊗	GAS GATE
—	ELECTRIC SPAN POLE	⊙	TELEPHONE BOX
—	ELECTRIC BOX	⊗	CATV TUBE
—	WETLAND FLAG	⊙	

PROJECT NUMBER  
 2023111

FILENAME  
 2023111-PLAN.DWG

NO.	DATE	FILE
—	11/08/24	FOR BIDDING

DRAWN BY: JL  
 CHECKED BY: JL  
 RELEASED BY: TB

DATUM  
 HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION  
 SPRUCE STREET  
 MANCHESTER, CT

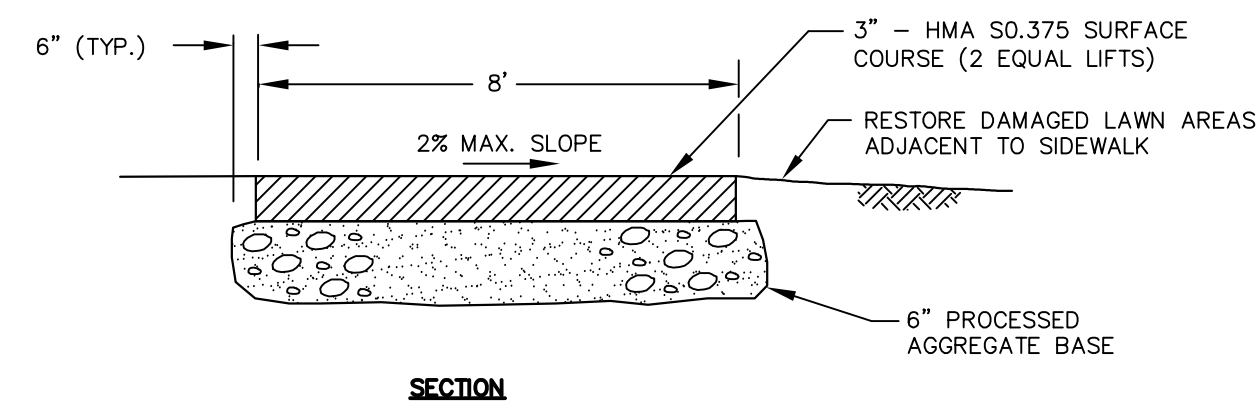
PROJECT TITLE  
 STREETScape IMPROVEMENTS  
 SPRUCE STREET AT  
 NATHAN HALE SCHOOL

SHEET TITLE

**DETAILS**

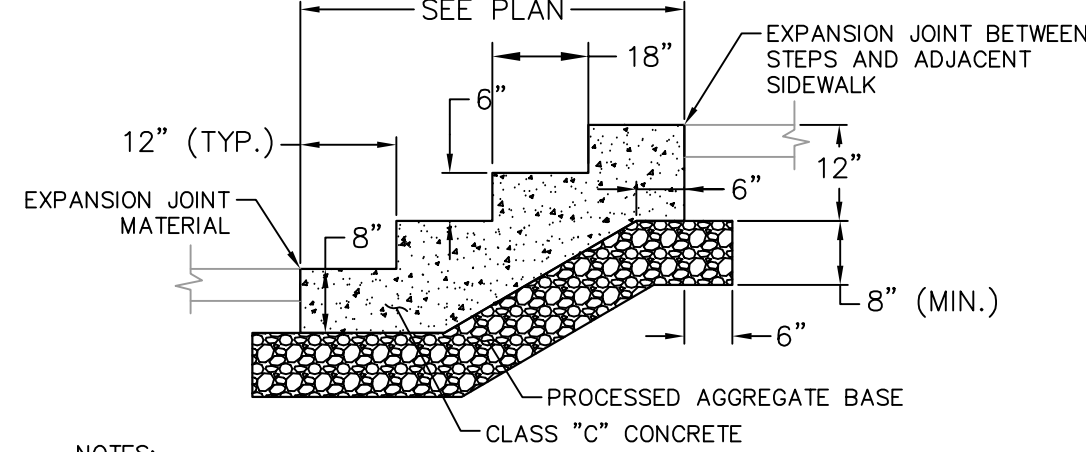
SHEET NUMBER

**20 of 22**



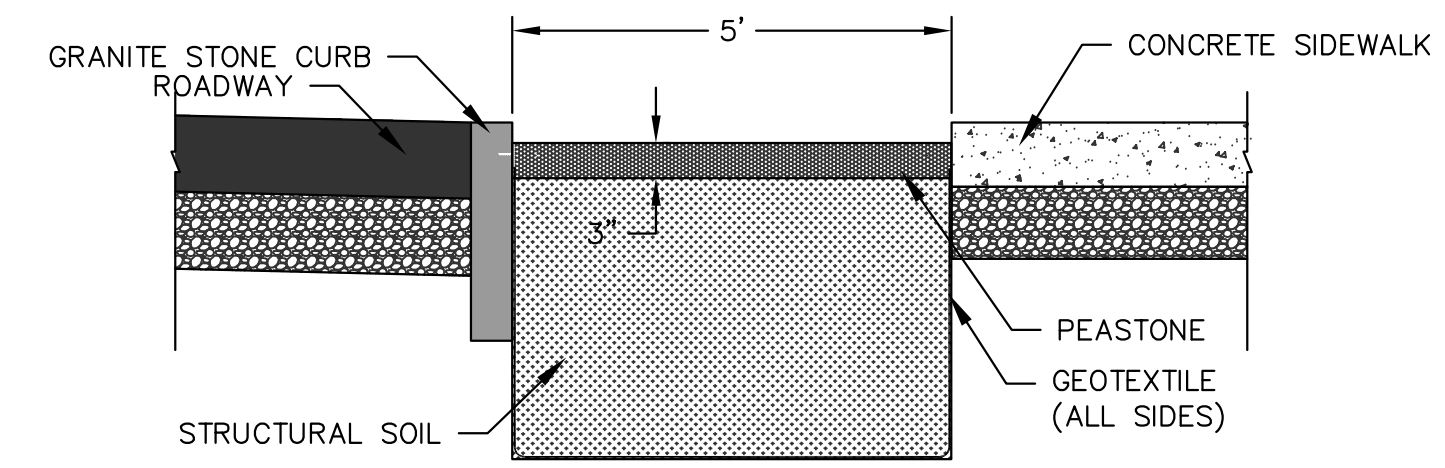
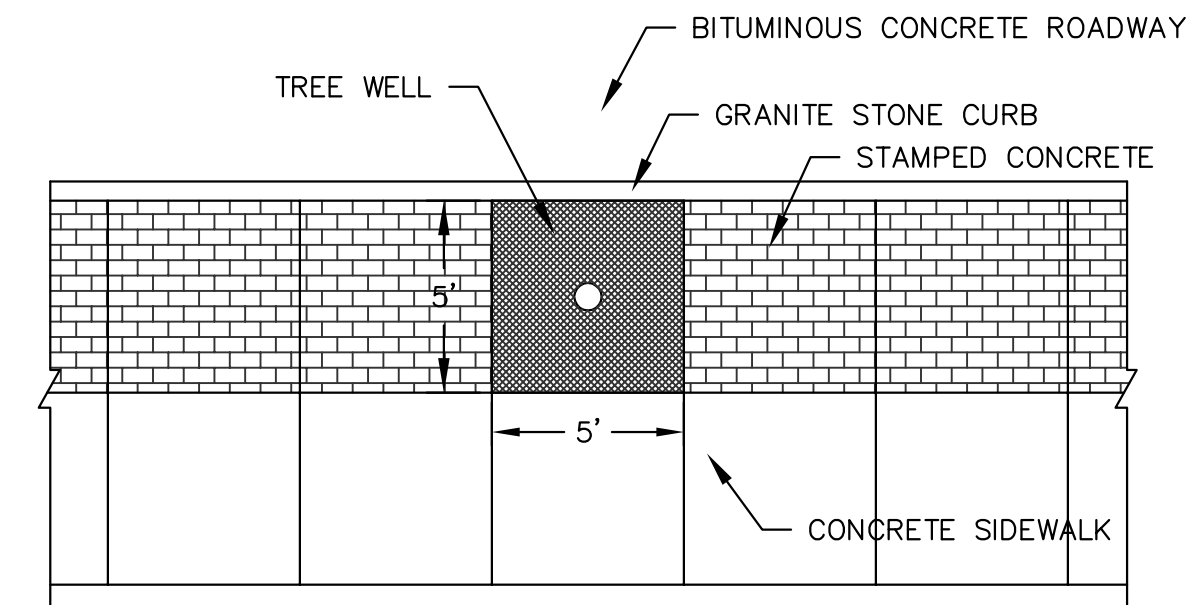
- NOTES:**
1. A MINIMUM 48" CLEAR WIDTH SHALL BE MAINTAINED BETWEEN THE EDGES OF THE SIDEWALK AND ANY OBSTRUCTIONS WITHIN THE SIDEWALK LIMITS.

**BITUMINOUS CONCRETE SIDEWALK**  
NOT TO SCALE

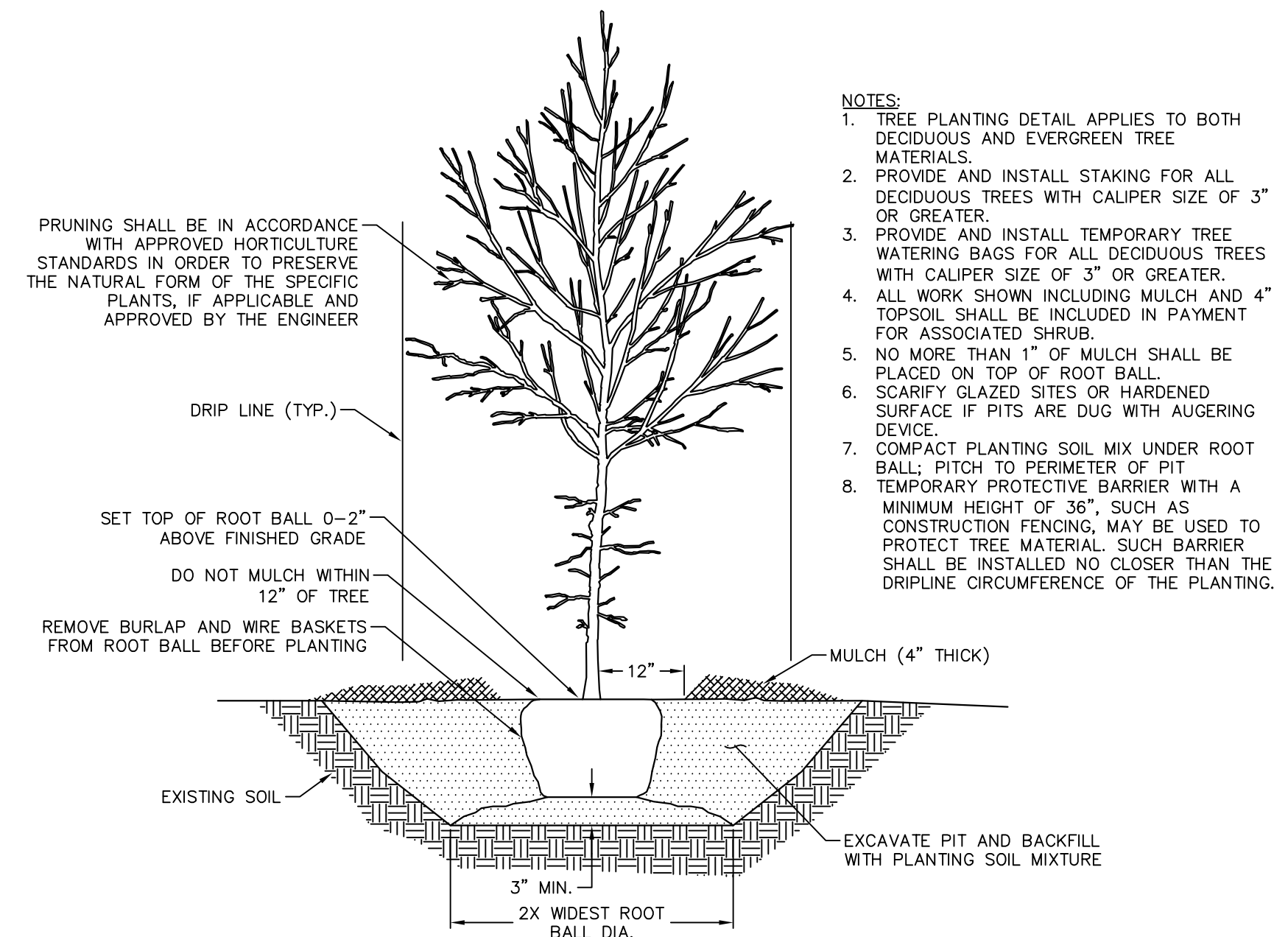


- NOTES:**
1. ALL STEPS SHALL HAVE UNIFORM RISER HEIGHTS AND UNIFORM TREAD DEPTHS. RISERS SHALL BE A MINIMUM OF 4" HIGH TO A MAXIMUM OF 7" HIGH. TREADS SHALL BE A MINIMUM OF 11" DEEP MEASURED FROM RISER TO RISER WITH A PITCH OF 1/4".

**CONCRETE STEPS**  
NOT TO SCALE



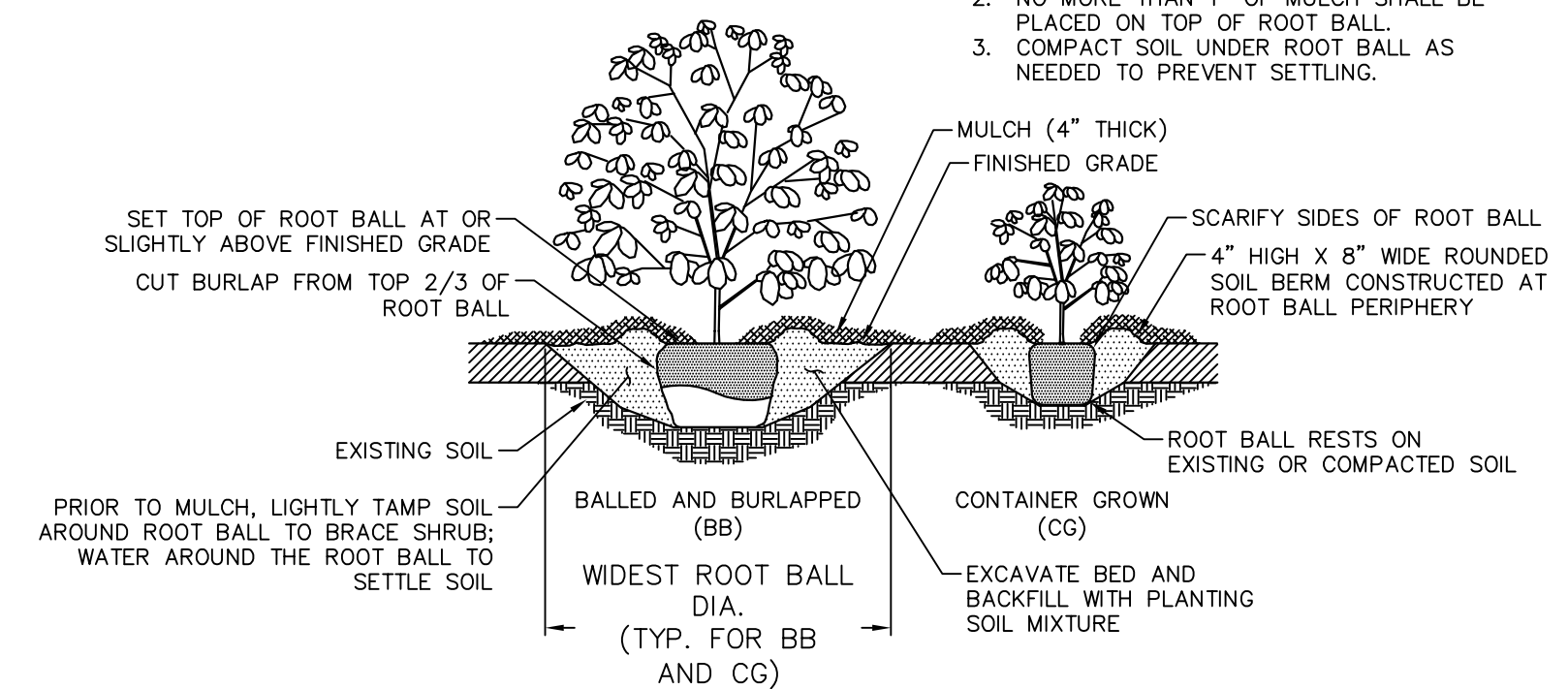
**TREE WELL**  
NOT TO SCALE



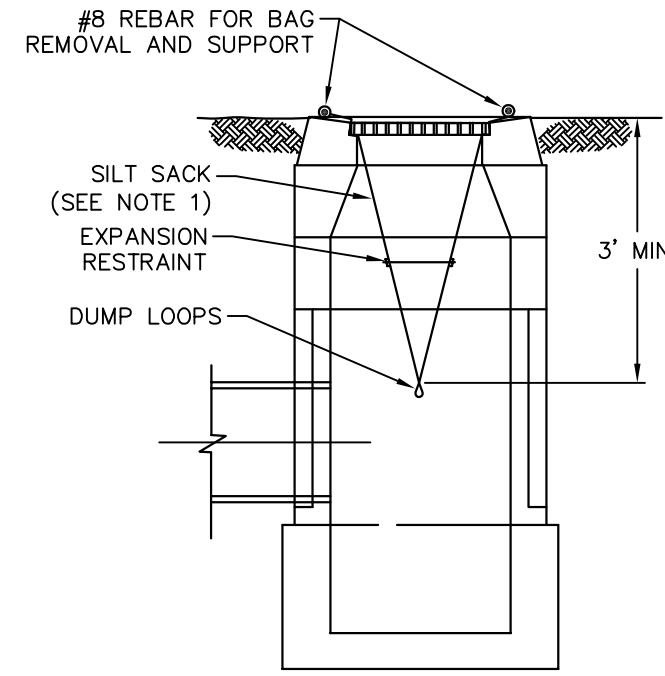
**TREE PLANTING**  
NOT TO SCALE

- NOTES:**
1. TREE PLANTING DETAIL APPLIES TO BOTH DECIDUOUS AND EVERGREEN TREE MATERIALS.
  2. PROVIDE AND INSTALL STAKING FOR ALL DECIDUOUS TREES WITH CALIPER SIZE OF 3" OR GREATER.
  3. PROVIDE AND INSTALL TEMPORARY TREE WATERING BAGS FOR ALL DECIDUOUS TREES WITH CALIPER SIZE OF 3" OR GREATER.
  4. ALL WORK SHOWN INCLUDING MULCH AND 4" TOPSOIL SHALL BE INCLUDED IN PAYMENT FOR ASSOCIATED SHRUB.
  5. NO MORE THAN 1" OF MULCH SHALL BE PLACED ON TOP OF ROOT BALL.
  6. SCARIFY GLAZED SITES OR HARDENED SURFACE IF PITS ARE DUG WITH AUGERING DEVICE.
  7. COMPACT PLANTING SOIL MIX UNDER ROOT BALL. PITCH TO PERIMETER OF PIT.
  8. TEMPORARY PROTECTIVE BARRIER WITH A MINIMUM HEIGHT OF 36" SUCH AS CONSTRUCTION FENCING, MAY BE USED TO PROTECT TREE MATERIAL. SUCH BARRIER SHALL BE INSTALLED NO CLOSER THAN THE DRIPLINE CIRCUMFERENCE OF THE PLANTING.

- NOTES:**
1. ALL WORK SHOWN INCLUDING MULCH AND 4" TOPSOIL SHALL BE INCLUDED IN PAYMENT FOR ASSOCIATED SHRUB.
  2. NO MORE THAN 1" OF MULCH SHALL BE PLACED ON TOP OF ROOT BALL AS NEEDED TO PREVENT SETTLING.

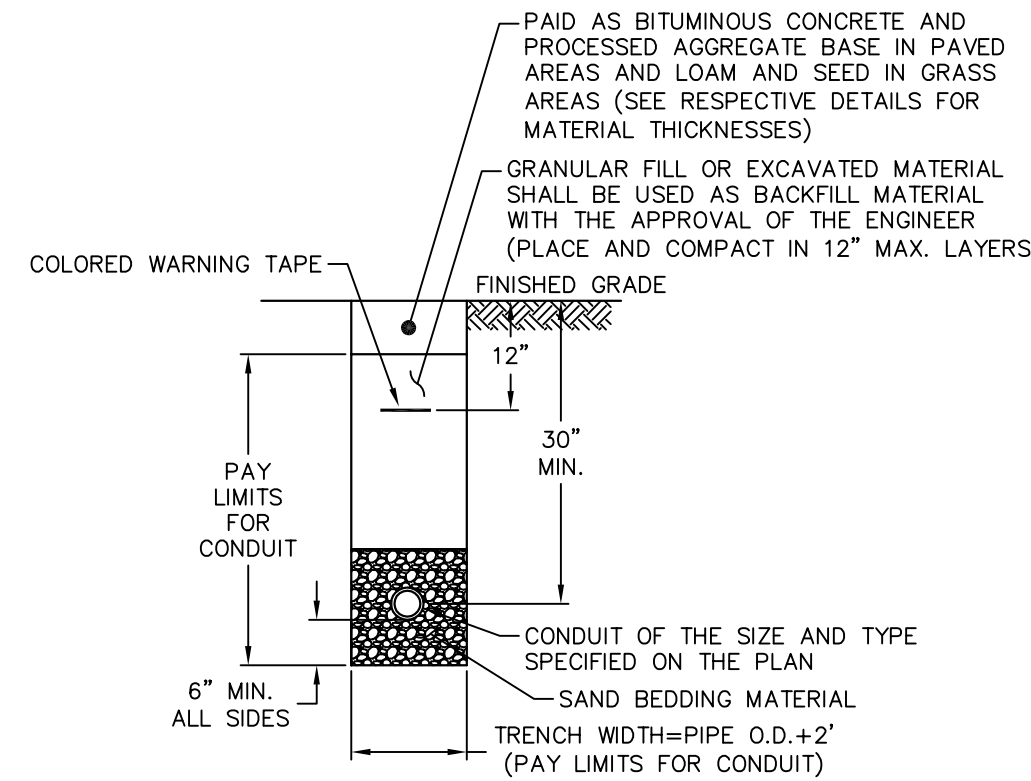


**SHRUB PLANTING**  
NOT TO SCALE

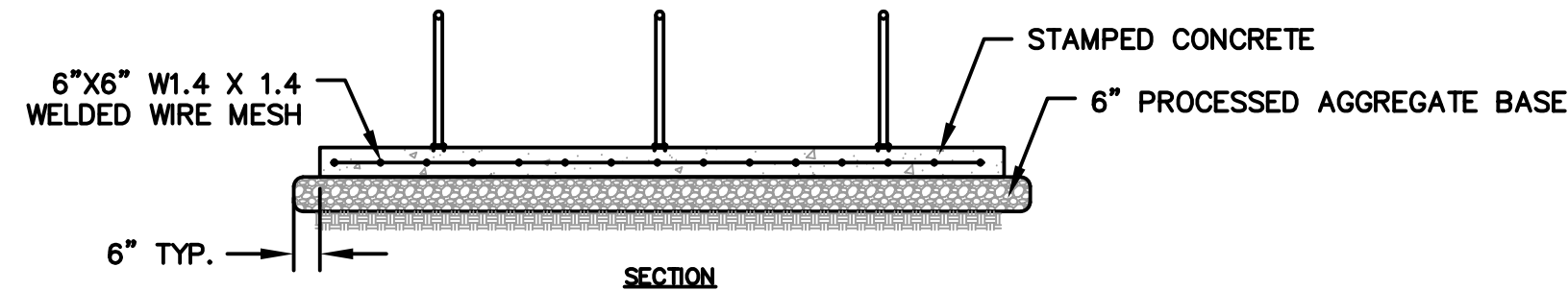
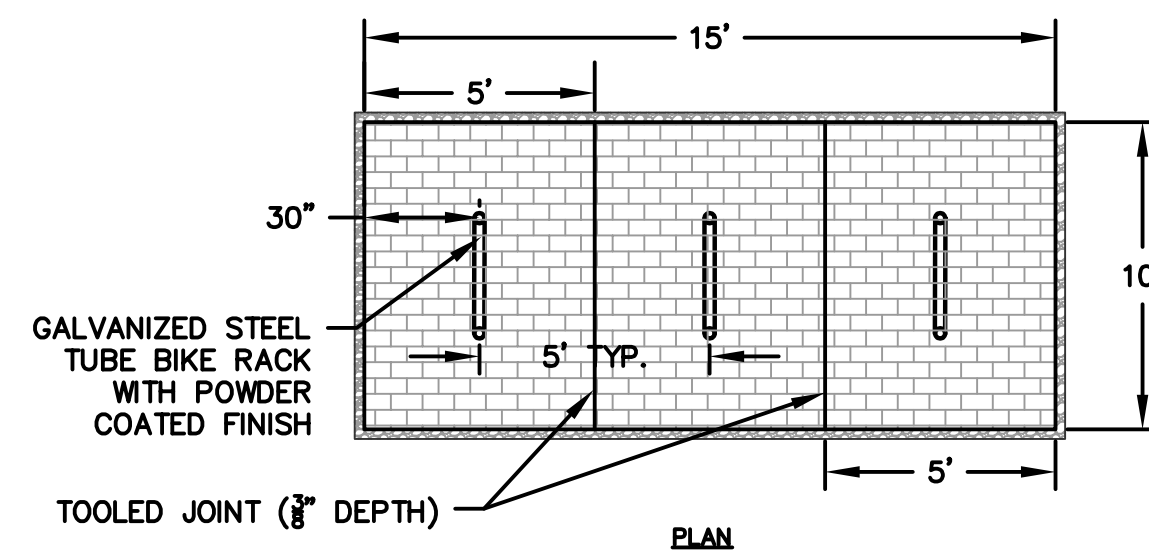


- NOTES:**
1. SILT SACKS SHALL BE HI-FLOW SILTSACK® "TYPE A" FOR TYPE "C-L" CB TOPS AND "TYPE B" WITH CURB DEFLECTORS FOR TYPE "C" CB TOPS OR OTHER STRUCTURES WITH CURB INLETS AS MANUFACTURED BY ACF ENVIRONMENTAL, INC OR APPROVED EQUAL.
  2. SILT SACKS SHALL BE PROVIDED WITH INTERNAL OVERFLOWS.
  3. SILT SACKS SHALL BE EMPTIED WHEN THEY HAVE COLLECTED 6" TO 12" OF SEDIMENT. INSPECT EVERY 1 TO 2 WEEKS AND AFTER EVERY MAJOR RAINFALL EVENT.

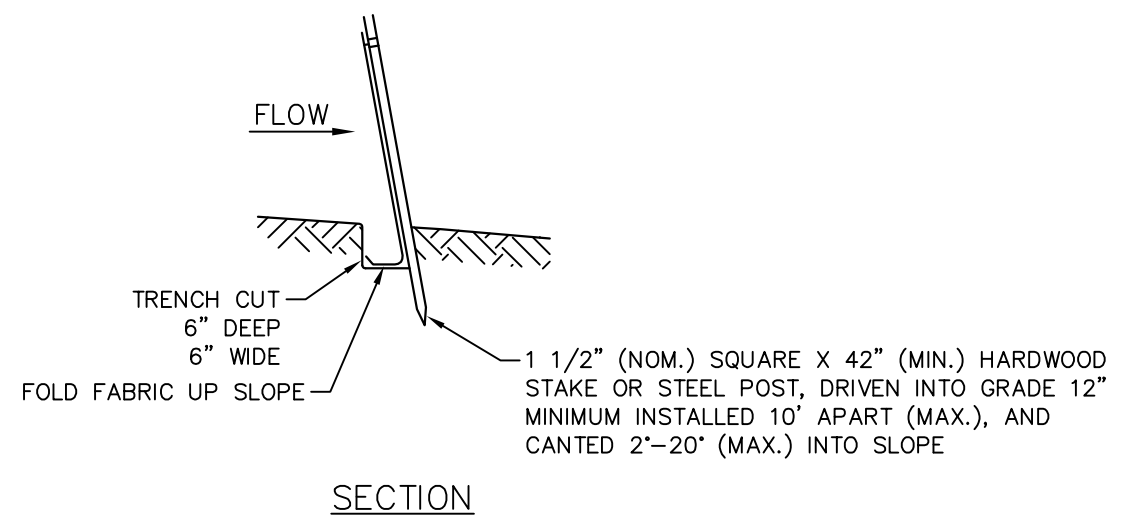
**SILT SACK**  
NOT TO SCALE



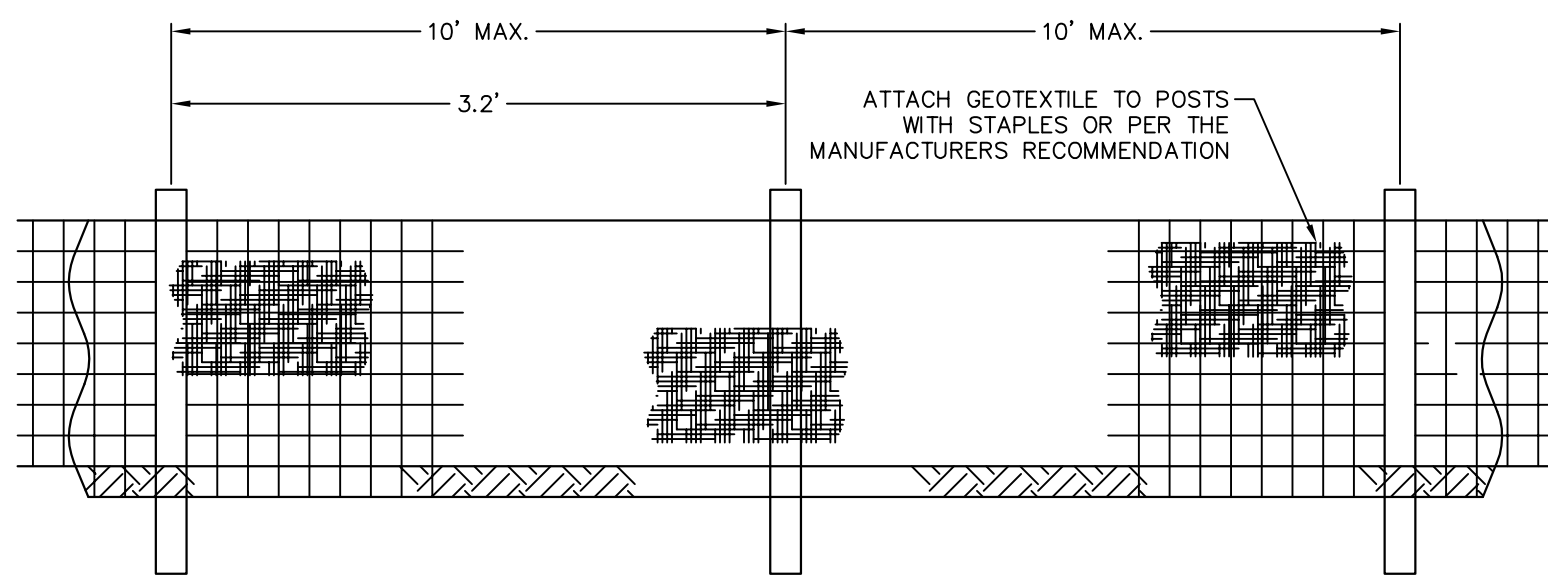
**CONDUIT IN TRENCH**  
NOT TO SCALE



**BIKE RACKS AND PAD**  
NOT TO SCALE



- NOTES:**
1. SEDIMENT CONTROL FABRIC TO BE A GEOTEXTILE MATERIAL TREATED TO RESIST DEGRADATION FROM EXPOSURE TO SUNLIGHT.
  2. FOR EACH SPECIFIC USE, ONLY GEOTEXTILES ON THE CONNECTICUT DEPARTMENT OF TRANSPORTATION APPROVED LIST ARE TO BE USED.
  3. AFTER FOLDING FABRIC EDGE, BACKFILL TRENCH WITH ORIGINAL SOIL AND BUTTRESS THE SPLAY WITH MULCH OR LEAF LITTER.



**SILT FENCE**  
NOT TO SCALE



TOWN OF MANCHESTER  
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494 MAIN STREET - P.O. BOX 191  
MANCHESTER, CT 06045-0191

**LEGEND**

—	WETLAND BOUNDARY	☆	LIGHT POLE
—	RETAINING WALL	⊗	CONIFEROUS TREE
—	GUIDE RAIL	⊙	DECIDUOUS TREE
—	STONE WALL	⊕	SANITARY MANHOLE
—	STOCKADE FENCE	⊖	DRAINAGE MANHOLE
—	WIRE FENCE	⊗	CATCH BASIN
—	CHAIN LINK FENCE	⊕	CULVERT END
—	PROPERTY LINE	⊖	HYDRANT
—	RAILROAD TRACKS	⊗	CURB STOP
—	SILT FENCE	⊕	WATER VALVE
—	CONCRETE MONUMENT	⊖	BUTTERFLY VALVE
—	GRANITE MONUMENT	⊕	BLOW OFF
—	IRON PIPE	⊖	SIGN
—	IRON ROD	⊕	DOUBLE POST SIGN
—	CONTROL POINT	⊖	MAL BOX
—	DRILL HOLE	⊕	BOLLARD
—	UTILITY POLE	⊖	CONTROLLER CABINET
—	UTILITY POLE WITH LIGHT	⊕	GAS GATE
—	TRAFFIC SPAN POLE	⊖	TELEPHONE BOX
—	ELECTRIC BOX	⊕	GATY TUBE
—	WETLAND FLAG	⊖	

PROJECT NUMBER  
**2023111**

FILENAME  
**2023111-PLAN.DWG**

NO.	DATE	FILE
—	11/08/24	FOR BIDDING

DRAWN BY: JL  
CHECKED BY: JL  
RELEASED BY: TB

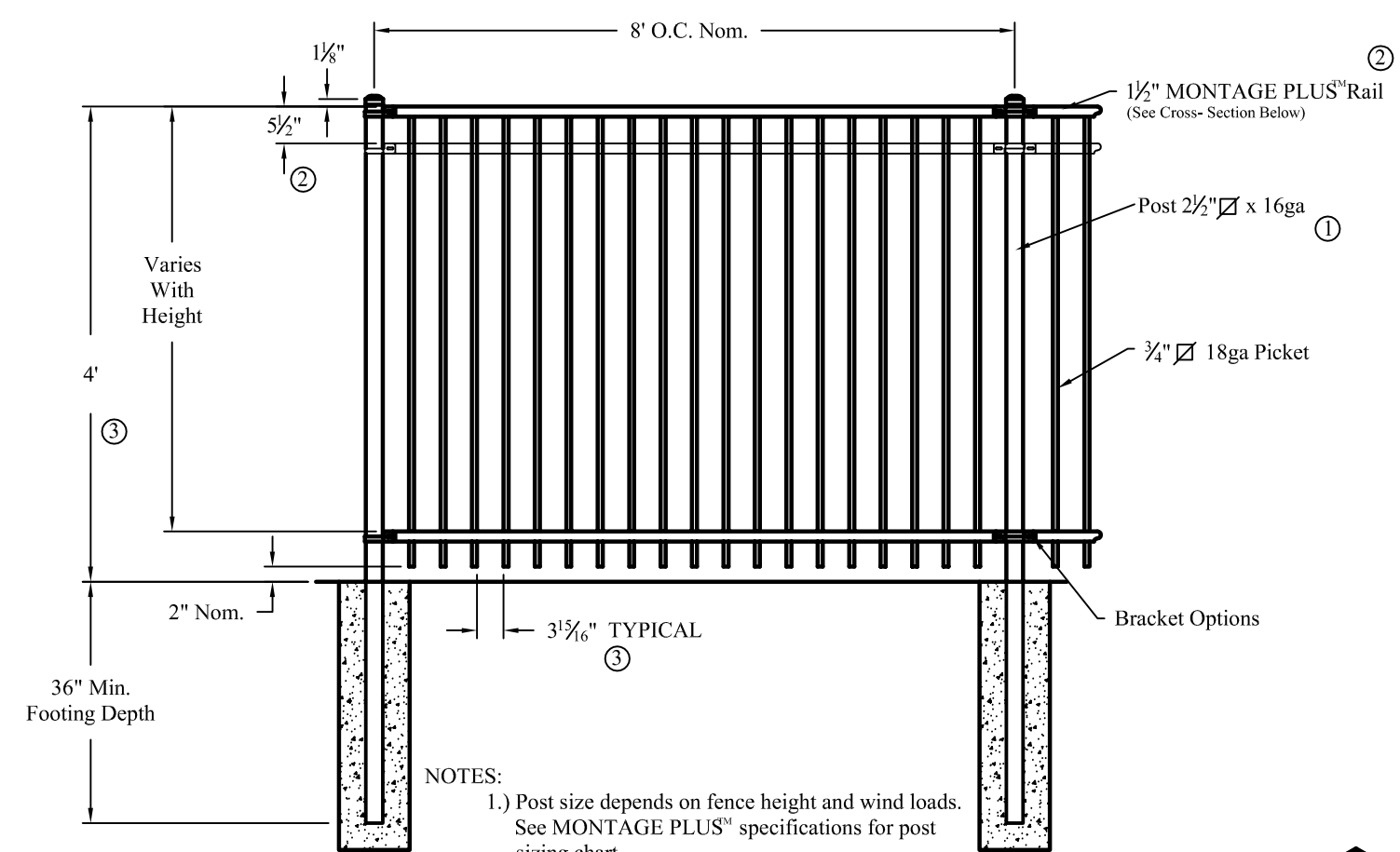
DATUM  
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION  
**SPRUCE STREET  
MANCHESTER, CT**

PROJECT TITLE  
**STREETSCAPE IMPROVEMENTS  
SPRUCE STREET AT  
NATHAN HALE SCHOOL**

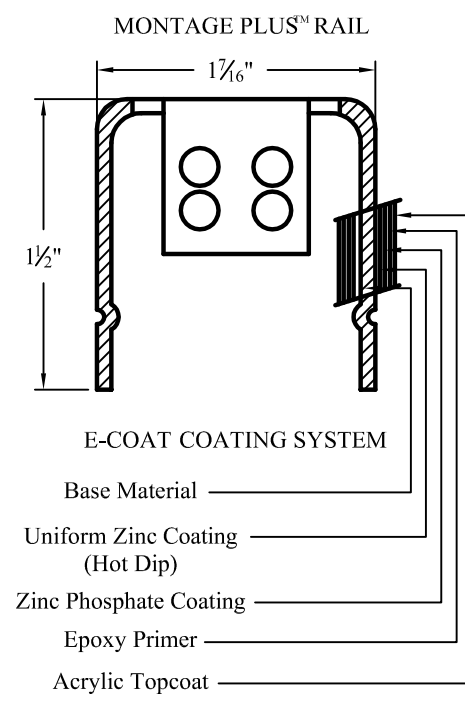
SHEET TITLE  
**DETAILS**

SHEET NUMBER  
**21 of 22**

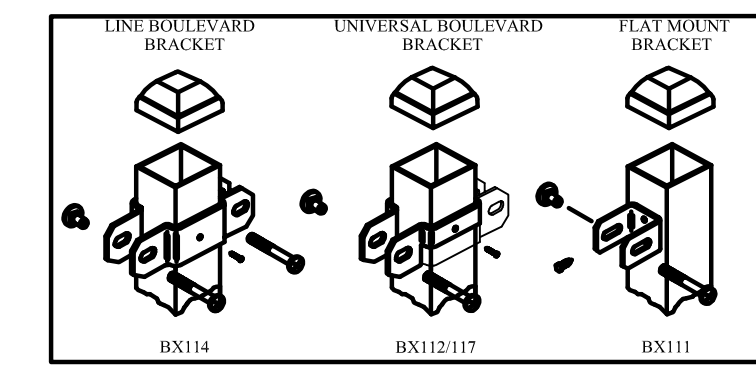


- NOTES:
- 1.) Post size depends on fence height and wind loads. See MONTAGE PLUS specifications for post sizing chart.
  - 2.) Third rail required for Double Rings.
  - 3.) Available in 3" air space and/or Flush Bottom on most heights.

**RAKING DIRECTIONAL ARROW**  
Welded panel can be raked 30° over 8' with arrow pointing down grade.

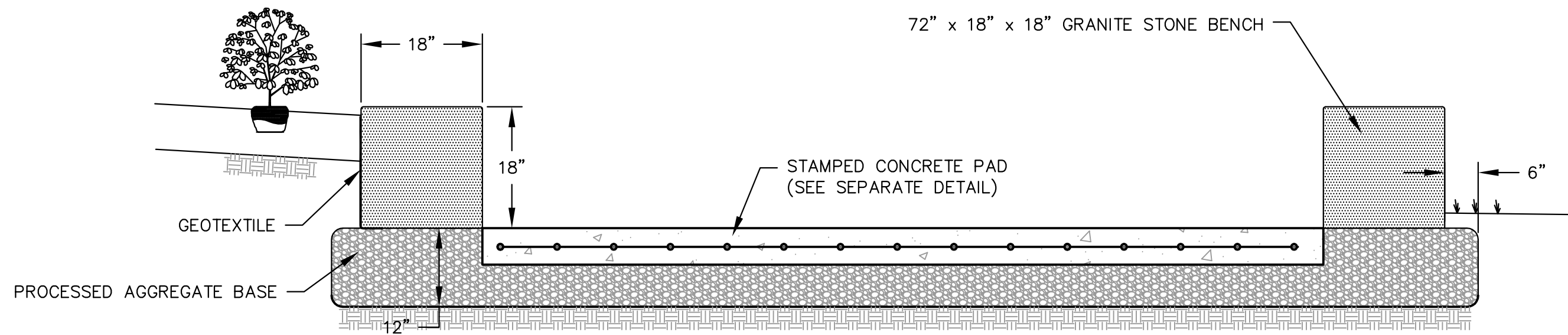


**PROFUSION™ WELDING PROCESS**  
No exposed welds. Good Neighbor profile - Same appearance on both sides.



**ORNAMENTAL STEEL FENCE**

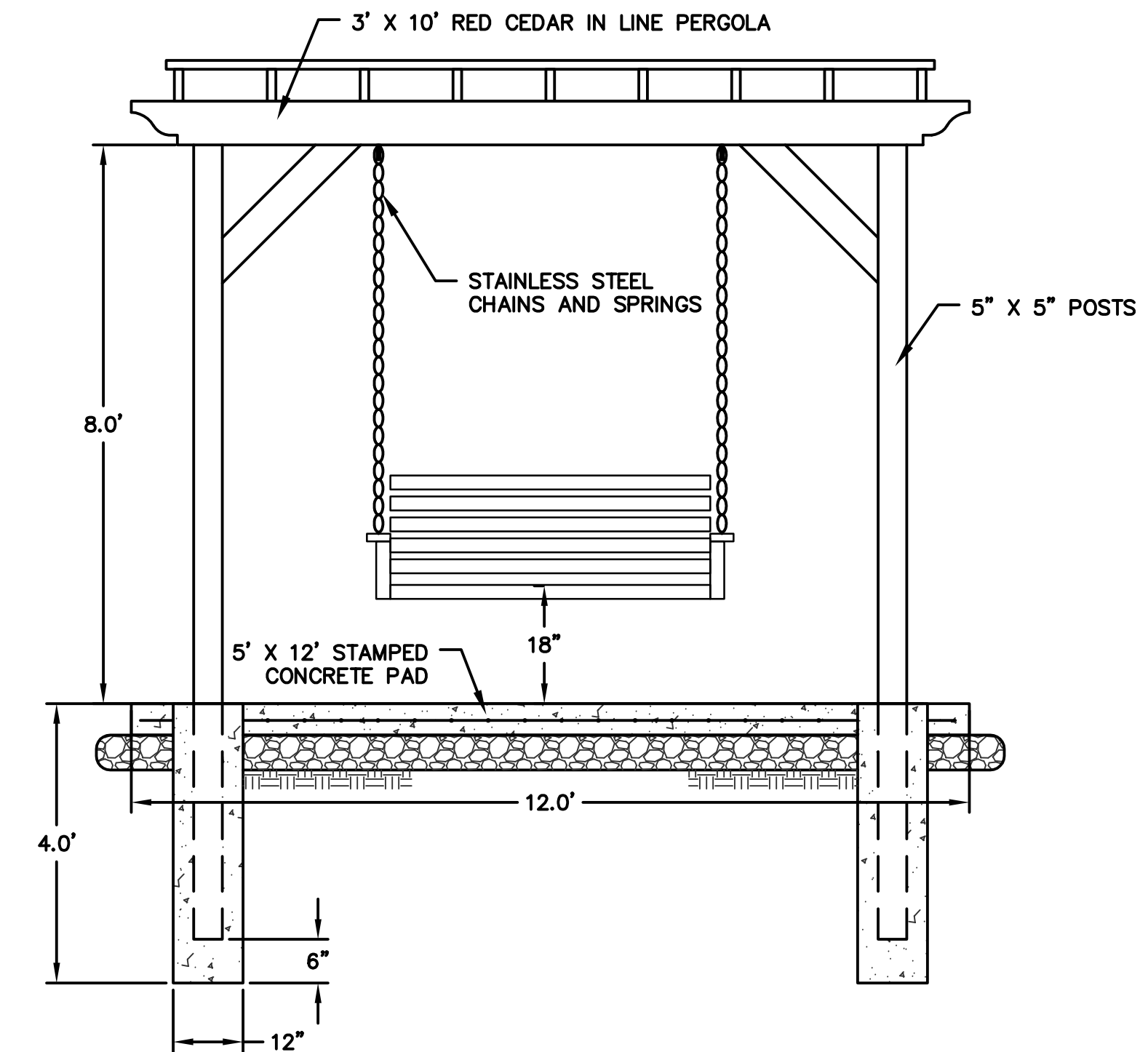
NOT TO SCALE



SECTION

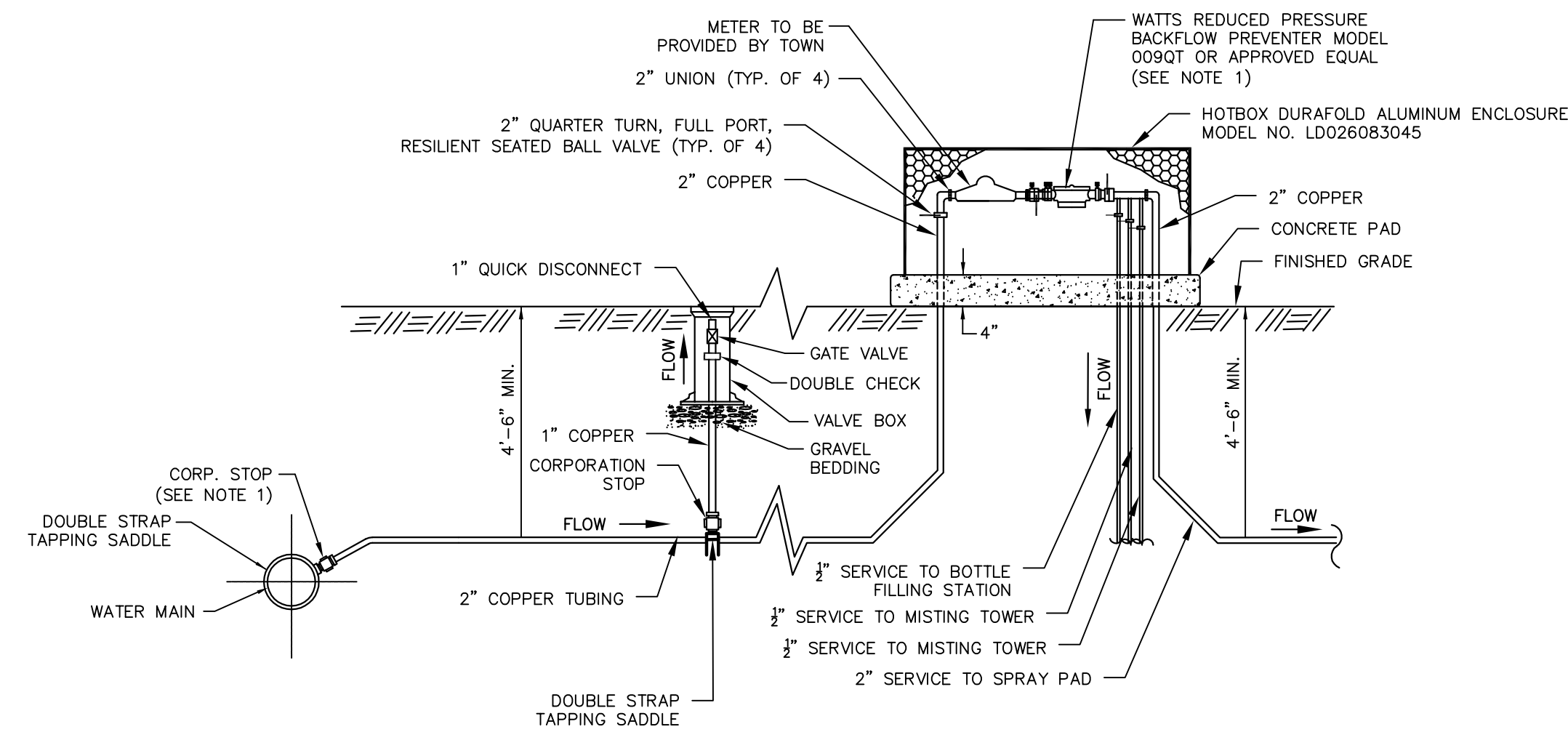
**GRANITE BLOCK SITTING WALL**

NOT TO SCALE



**PERGOLA WITH SWING**

NOT TO SCALE



- NOTES:
1. BACKFLOW PREVENTER MUST BE INSTALLED LEVEL OR WITH THE OUTLET LOWER THAN THE INLET.

**WATER SERVICE**

NOT TO SCALE



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PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
494 MAIN STREET - P.O. BOX 191  
MANCHESTER, CT 06045-0191

LEGEND

—	WETLANDS BOUNDARY	☆	LIGHT POLE
—	RETAINING WALL	⊗	CONIFEROUS TREE
—	GUIDE RAIL	⊗	DECIDUOUS TREE
—	STONE WALL	⊗	SECONDARY MANHOLE
—	STOCKADE FENCE	⊗	SANITARY MANHOLE
—	WIRE FENCE	⊗	DRAINAGE MANHOLE
—	CHAIN LINK FENCE	⊗	CATCH BASIN
—	PROPERTY LINE	⊗	CULVERT END
—	RAILROAD TRACKS	⊗	HYDRANT
—	SILT FENCE	⊗	WATER VALVE
—	CONCRETE MONUMENT	⊗	CURB STOP
—	GRANITE MONUMENT	⊗	WATER VALVE
—	IRON PIPE	⊗	BUTTERFLY VALVE
—	IRON ROD	⊗	BLOW OFF
—	CONTROL POINT	⊗	BLow OFF
—	DRILL HOLE	⊗	SIGN
—	UTILITY POLE	⊗	DOUBLE POST SIGN
—	UTILITY POLE WITH LIGHT	⊗	MAIL BOX
—	TRAFFIC SPAN POLE	⊗	BOLLARD
—	ELECTRIC BOX	⊗	CONTROLLER CABINET
—	WETLAND FLAG	⊗	GAS GATE
		⊗	TELEPHONE BOX
		⊗	CATV TUBE

PROJECT NUMBER  
**2023111**

FILENAME  
**2023111-PLAN.DWG**

NO.	DATE	FILE
—	11/08/24	FOR BIDDING

DRAWN BY: JL  
CHECKED BY: JL  
RELEASED BY: TB

DATUM  
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION  
**SPRUCE STREET  
MANCHESTER, CT**

PROJECT TITLE  
**STREETSCAPE IMPROVEMENTS  
SPRUCE STREET AT  
NATHAN HALE SCHOOL**

SHEET TITLE  
**DETAILS**

SHEET NUMBER  
**22 of 22**



TOWN OF MANCHESTER  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
494 MAIN STREET - P.O. BOX 191  
MANCHESTER, CT 06045-0191

LEGEND

—	WETLANDS BOUNDARY	☆	LIGHT POLE
—	RETAINING WALL	⊗	CONIFEROUS TREE
—	GUIDE RAIL	⊙	DECIDUOUS TREE
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—	WIRE FENCE	⊗	CATCH BASIN
—	CHAIN LINK FENCE	⊕	CULVERT END
—	PROPERTY LINE	⊖	HYDRANT
—	SILT FENCE	⊗	CURB STOP
—	RAILROAD TRACKS	⊕	WATER VALVE
—	CONCRETE MONUMENT	⊖	BUTTERFLY VALVE
—	GRANITE MONUMENT	⊕	BLOW OFF
—	IRON PIPE	⊖	SIGN
—	IRON ROD	⊕	DOUBLE POST SIGN
—	CONTROL POINT	⊖	MAIL BOX
—	ORILL HOLE	⊕	BOLLARD
—	UTILITY POLE	⊖	CONTROLLER CABINET
—	UTILITY POLE WITH LIGHT	⊕	GAS GATE
—	TRAFFIC SPAN POLE	⊖	TELEPHONE BOX
—	ELECTRIC BOX	⊕	CATV TUBE
—	WETLAND FLAG		

PROJECT NUMBER  
**2023111**

FILENAME  
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NO.	DATE	FILE
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DATUM  
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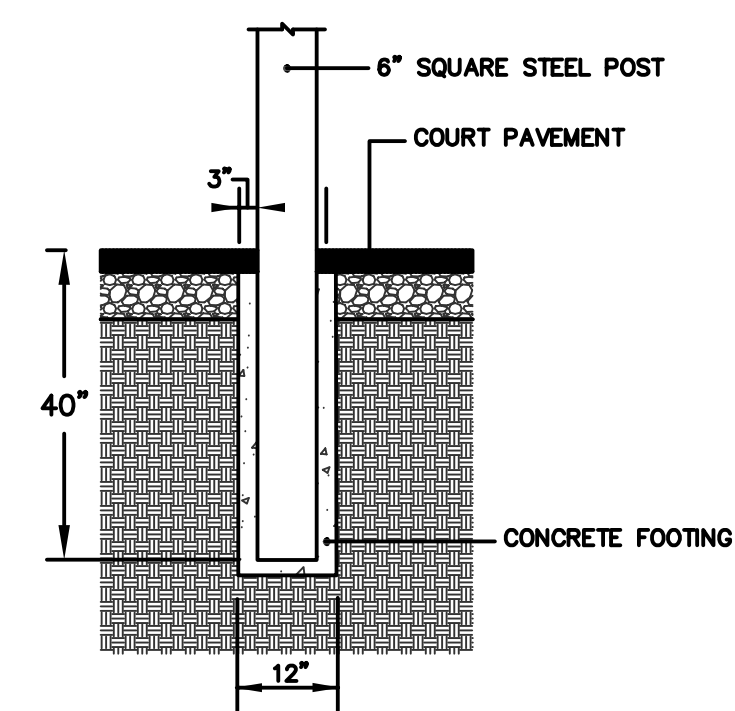
PROJECT LOCATION  
**SPRUCE STREET  
MANCHESTER, CT**

PROJECT TITLE  
**STREETSCAPE IMPROVEMENTS  
SPRUCE STREET AT  
NATHAN HALE SCHOOL**

SHEET TITLE  
**DETAILS**

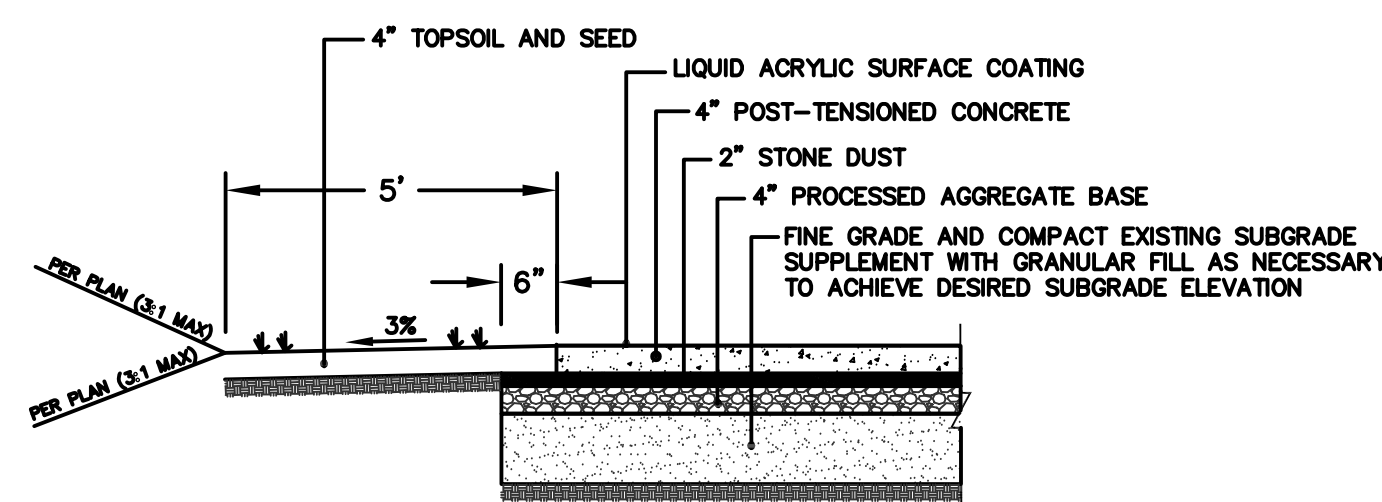
SHEET NUMBER  
**ALTERNATE BID NO. 1**

SHEET 1 OF 1



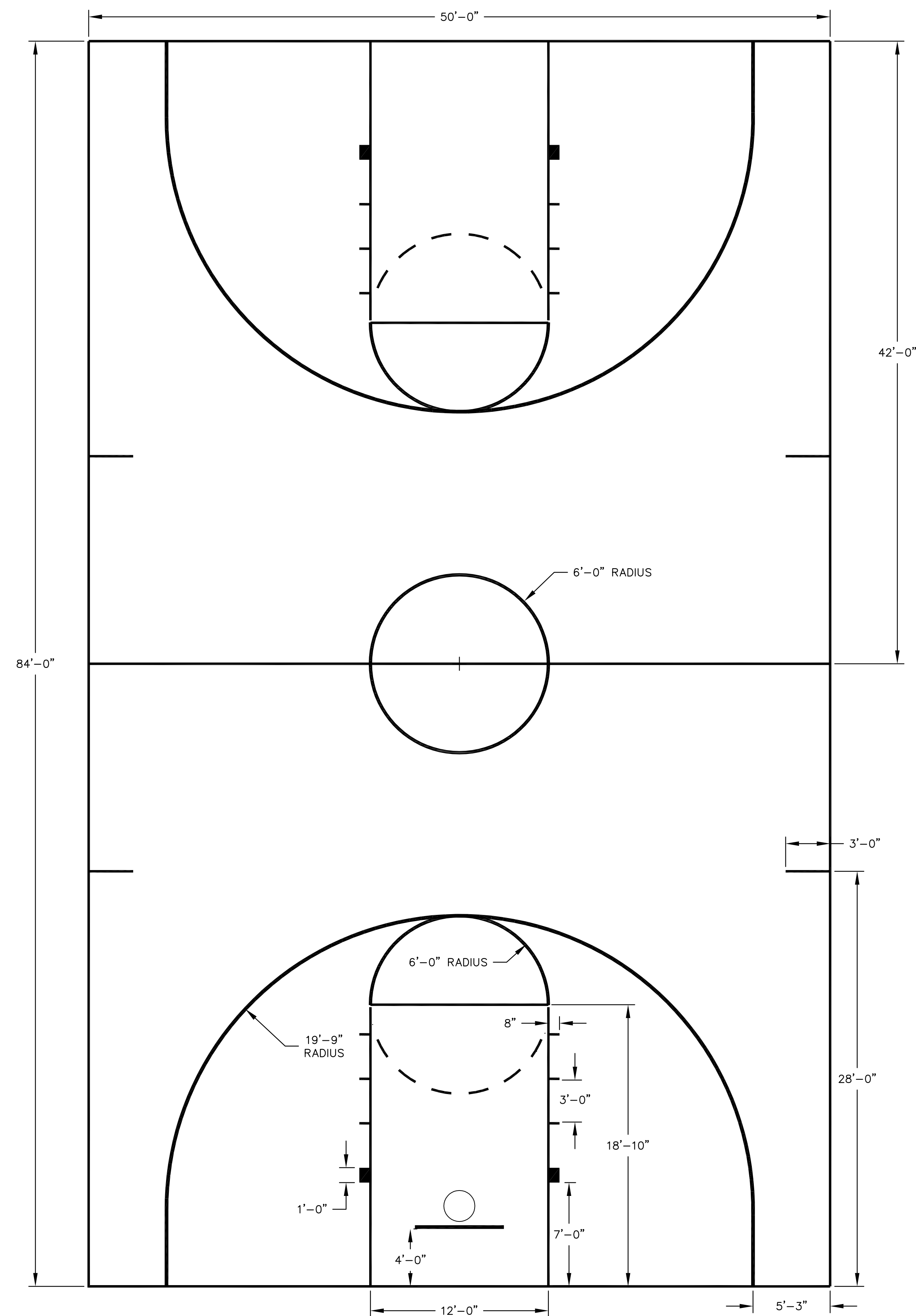
**BASKETBALL HOOP  
POST FOUNDATION**

NOT TO SCALE



**TYPICAL COURT SECTION**

NOT TO SCALE



**MARKINGS**

SCALE: 1" = 5'