

F. H. W. A. REGION NO.	STATE	TOWN(S)	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN.	VERNON	1146(111)	146-195	2016		1	104

TOWN OF VERNON FINAL DESIGN PLANS

FOR RECONSTRUCTION OF SOUTH STREET IN THE TOWN OF VERNON

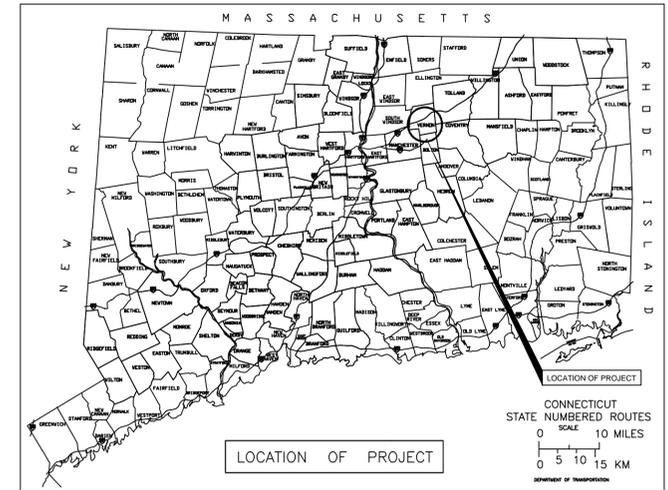
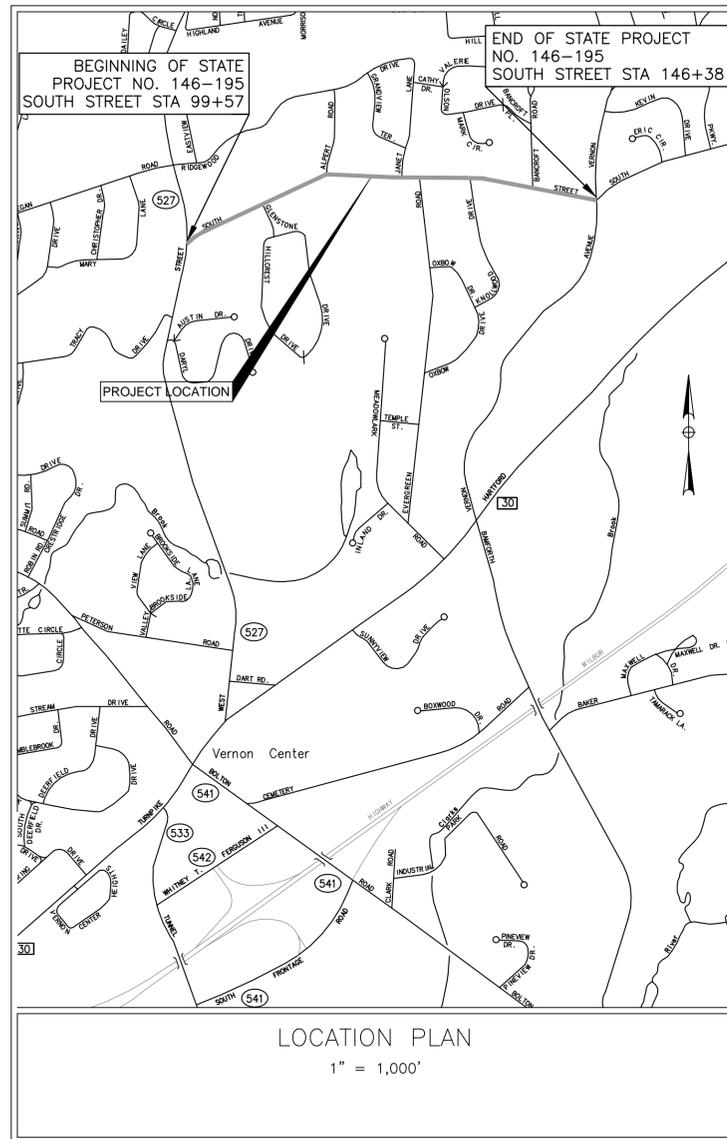
STATE PROJECT NO. 146-195
FEDERAL AID PROJECT NO. 1146(111)
FROM STA. 99+57 TO STA. 146+37.71

LENGTH 4,680.71 ft

DESIGN { PLAN 1 in = 40 ft
PROFILE HORZ. 1 in = 40 ft VERT. 1 in = 4 ft
SCALES { CROSS SECTIONS 1 in = 5 ft

OTHER SCALES AS NOTED

TO BE MAINTAINED BY THE TOWN OF VERNON



TOWN NO. 146
PROJECT NO. 146-195

STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND
INCIDENTAL CONSTRUCTION, FORM 816 INCLUDING SUPPLEMENT
THERETO DATED JANUARY 2016 GOVERN.
ALL ELEVATIONS ON THIS PROJECT BASED ON N.G.V.D. OF
1929, IN FEET. ALL COORDINATES BASED ON CONNECTICUT
COORDINATE GRID (NAD 1983), IN FEET
DESIGN STANDARDS: CONN. HIGHWAY DESIGN MANUAL
2003 EDITION & AASHTO 2004
DESIGN SPEED: 40 MPH
FUNCTIONAL CLASSIFICATION: URBAN COLLECTOR
TRAFFIC VOLUME: SOUTH STREET:
2010 ADT 2836 VPD
2030 ADT 3390 VPD

DESIGN BY: CARDINAL ENGINEERING ASSOCIATES, INC

SIGNATURE: _____

CONN. PROF. ENG. REG. NO.: _____

DATE SUBMITTED: _____

TOWN OF VERNON
CONNECTICUT

RECOMMENDED FOR
APPROVAL BY: _____

DAVID A. SMITH, P.E., L.S., TOWN ENGINEER DATE

APPROVED: _____

DANIEL A. CHAMPAGNE, MAYOR DATE

LIST OF SUBSETS		
SUBSET NO.	SUBSET TITLE	* SUBSET SHEET COUNT
01	GENERAL	3
02	REVISIONS	1
03	HIGHWAYS	60
04	TRAFFIC	6
05	CT WATER—FOR INFORMATION ONLY	9
06	FRONTIER/EVERSOURCE AERIAL UTILITY	
07	RELOCATION—FOR INFORMATION ONLY	4
08	EVERSOURCE ENERGY—FOR INFORMATION ONLY	—
09	CTDOT HIGHWAY STANDARD SHEETS	14
	CTDOT TRAFFIC STANDARD SHEETS	7

* THE INITIAL SUBSET
SHEET COUNT DOES
NOT INCLUDE ADDENDUMS
AND CHANGE ORDERS.

INDEX OF DRAWINGS		
DRAWING NO.	SHEET NO.	DRAWING TITLE
GEN-01	01.01	TITLE SHEET
DES-01	01.02	DETAILED ESTIMATE SHEET
GEN-02	01.03	ABBREVIATIONS, LEGEND & GENERAL NOTES

ITEM NO.	PARTICIPATING ITEMS																																														
	0201001	0202000	0202100	0202200	0202351	0202451A	0202239	0205001	0205002	0205003	0205004	0205005	0205006	0209001	0211000	0212000	0213100	0216012A	0219001	0219011A	0304002	0406002A	0404100A	0406171	0406236	0506001	0507001	0507006	0507011	0507021	0507022	0507051	0507080	0507090	0507701	0551001	0551012	0551013	0551015	0551017	0551051	0551055	0551057				
ITEM	CLEARING & GRUBBING	EARTH EXCAVATION	ROCK EXCAVATION	CHANNEL EXCAVATION - EARTH	UNSUITABLE MATERIAL EXCAVATION	TEST PIT EXCAVATION	CUT BITUMINOUS CONCRETE PAVEMENT	TRENCH EXCAVATION (0'-4" DEEP)	ROCK IN TRENCH EXCAVATION (0'-4" DEEP)	TRENCH EXCAVATION (0'-10" DEEP)	ROCK IN TRENCH EXCAVATION (0'-10" DEEP)	TRENCH EXCAVATION (0'-15" DEEP)	ROCK IN TRENCH EXCAVATION (0'-15" DEEP)	FORMATION OF SUBGRADE	ANTI-TRACKING PAD	SUBBASE	GRANULAR FILL	CONTROLLED LOW STRENGTH MATERIAL	SEDIMENTATION CONTROL SYSTEM	SEDIMENT CONTROL AT CATCH BASIN	PROCESSED AGGREGATE BASE	TEMPORARY PAVEMENT	BITUMINOUS CONCRETE PATCHING - FULL DEPTH	HMA SO.50	MATERIAL FOR TACK COAT	CONCRETE FOR STEPS & COPINGS	TYPE 'C' CATCH BASIN	TYPE 'C' CATCH BASIN TOP	TYPE 'C' CATCH BASIN (MODIFIED)	TYPE 'C' CATCH BASIN DOUBLE GRATE TYPE I	TYPE 'C' CATCH BASIN DOUBLE GRATE TYPE II	TYPE 'C' CATCH BASIN OVER 10' DEEP	TYPE 'C' CATCH BASIN DOUBLE GRATE TYPE I (MODIFIED)	SPECIAL ROUND TYPE 'C' CATCH BASIN	RESET TYPE 'C' CATCH BASIN	BEDDING MATERIAL	15" R.C.P.	18" R.C.P.	24" R.C.P.	30" R.C.P.	12" R.C.P. CLASS V	24" R.C.P. CLASS V	30" R.C.P. CLASS V				
UNIT	L.S.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	L.F.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	L.F.	L.F.	L.F.	C.Y.	C.Y.	TON	GAL	C.Y.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.			
SOUTH ST STA 99+57 TO STA 105+00		1169	62	0	58	0	948	7	0	480	7	37	0	1975	0	607	48	0	890	8	329	359	0	454	197	0.0	2	0	0	0	0	0	0	0	0	0	0	0	50	654	40	0	0	0	0		
SOUTH ST STA 105+00 TO STA 111+00		1385	73	0	69	0	153	0	0	0	0	0	0	2062	0	642	0	0	957	0	344	0	0	474	206	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SOUTH ST STA 111+00 TO STA 117+00		2131	112	4	107	0	1191	9	0	898	5	117	8	2076	122	683	97	13	974	6	346	339	127	477	208	0.0	0	0	0	0	0	0	0	0	0	0	0	0	84	330	0	183	25	16	202	217	
SOUTH ST STA 117+00 TO STA 123+00		2087	110	0	104	84	661	0	0	501	6	33	8	1851	0	619	51	0	828	5	309	146	0	426	185	0.0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SOUTH ST STA 123+00 TO STA 129+00		1747	92	0	87	0	479	0	0	161	0	0	0	2310	0	729	29	0	1034	2	385	180	0	531	231	0.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH ST STA 129+00 TO STA 135+00		2335	123	0	117	60	263	0	0	0	0	0	0	2267	0	747	0	0	1396	0	378	0	0	521	227	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH ST STA 135+00 TO STA 141+00		1971	1333	0	99	0	64	0	0	0	0	0	0	2085	0	678	0	0	1228	0	348	0	0	480	209	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH ST STA 141+00 TO STA 146+38		1323	444	4	66	0	259	7	0	122	0	0	0	1860	0	583	9	0	176	9	310	54	0	428	186	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL		14147	2349	4	707	144	3958	24	0	2160	18	188	17	16467	122	5267	234	13	7483	30	2748	1079	127	3792	1649	0.7	7	3	1	4	2	2	1	1	3	198	1869	40	183	35	16	202	217				
UNASSIGNED		853	151	96	93	56	242	76	4	140	2	12	83	833	78	273	16	7	377	2	352	121	73	208	91	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
TOTAL QUANTITY	L.S.	15000	2500	100	800	200	4200	100	4	2300	20	200	100	17320	200	5560	250	20	7860	32	3100	1200	200	4000	1740	1	7	3	1	4	2	2	1	1	3	198	1869	40	183	35	16	202	217				

ITEM NO.	PARTICIPATING ITEMS																																																
	0651056	0651719	0652014	0653001	0653100	0703012	0728032	0731120	0751831	0814005	0915001	0995011A	0995108A	09211001	09211005	0921039	0922001	0922200	0922301	0924002	0924007A	0942001	0943001	0943002	0944004	0946001	0950005	0999092A	0970007	0971001A	0975004	0976002	0977001	0978002	0979003	0980001	0981101A	1206023A	1208031	1208032	1209114	1209124	1209131						
ITEM	12" CORRUGATED PE PIPE (SMOOTH INTERIOR)	12" DUCTILE IRON PIPE	30" REINFORCED CONCRETE CULVERT END	CLEAN EXISTING CATCH BASIN	CLEAN EXISTING CULVERT - 12" TO 42" DIAMETER	MODIFIED RIPRAP	NO. 6 CRUSHED STONE	UNDERDRAIN WITH 6" PERFORATED CORRUGATED POLYETHYLENE PIPE	6" OUTLET FOR UNDERDRAIN	RESET GRANITE CURVED STONE CURBING	BITUMINOUS CONCRETE LIP CURBING	RESET FENCE	6" STOCKADE FENCE	CONCRETE SIDEWALK	CONCRETE SIDEWALK RAMP	DETECTABLE WARNING STRIP	BITUMINOUS CONCRETE SIDEWALK	BITUMINOUS CONCRETE DRIVEWAY (COMMERCIAL)	BITUMINOUS CONCRETE DRIVEWAY	CONCRETE DRIVEWAY RAMP	RELAY BELGIAN BLOCK PAVERS	CALCIUM CHLORIDE FOR DUST CONTROL	WATER FOR DUST CONTROL	SWEEPING FOR DUST CONTROL	FURNISHING & PLACING TOPSOIL	LIMING	TURF ESTABLISHMENT	CONSTRUCTION FIELD OFFICE, MEDIUM	TRAFFICPERSON (UNIFORMED FLAGGER)	MAINTENANCE & PROTECTION OF TRAFFIC	MOBILIZATION & PROJECT CLOSEOUT	BARRICADE WARNING LIGHTS HIGH INTENSITY	TRAFFIC CONES	TRAFFIC DRUMS	CONSTRUCTION BARRICADE TYPE III	CONSTRUCTION STAKING	OPPOSING TRAFFIC LANE DIVIDER	REMOVAL AND RELOCATION OF EXISTING SIGNS	SIGN FACE - SHEET ALUMINUM (TYPE IX) RETROREFLECTIVE (SHEETING)	SIGN FACE - SHEET ALUMINUM (TYPE IV) RETROREFLECTIVE (SHEETING)	HOT-APPLIED PAINTED PAVEMENT MARKINGS 4" YELLOW	HOT-APPLIED PAINTED PAVEMENT MARKINGS 4" WHITE	HOT-APPLIED PAINTED LEGEND, ARROWS, AND MARKINGS						
UNIT	L.F.	L.F.	L.F.	L.F.	L.F.	C.Y.	C.Y.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	M.O.	H.R.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.			
SOUTH ST STA 99+57 TO STA 105+00	0	0	0	1	61	0	382	130	0	1139	0	0	0	1801	131	1	0	0	285	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SOUTH ST STA 105+00 TO STA 111+00	0	0	0	0	0	0	0	820	105	0	1093	0	0	2879	152	2	0	0	273	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SOUTH ST STA 111+00 TO STA 117+00	9	0	1	1	76	3	0	200	0	1111	50	0	0	4181	280	2	0	0	122	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH ST STA 117+00 TO STA 123+00	0	0	0	0	54	0	11	588	0	1063	130	0	0	4466	0	0	0	0	190	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH ST STA 123+00 TO STA 129+00	0	0	0	0	0	0	0	706	0	1154	66	0	0	4929	370	2	0	0	273	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH ST STA 129+00 TO STA 135+00	0	0	0	0	0	0	0	600	0	1059	0	0	0	4729	129	2	0	0	491	36	78	1.1	159	12	1223	0.3	1223																						
SOUTH ST STA 135+00 TO STA 141+00	0	0	0	0	0	0	0	600	0	1234	0	0	87	5999	114	2	0	0	173	0	0	1.0	146	11	2058	0.4	2058																						
SOUTH ST STA 141+00 TO STA 146+38	0	57	0	1	6	0	11	495	0	56	972	0	0	1213	108	2	0	0	97	15	0	0.9	130	10	606	0.1	606																						
SUBTOTAL	9	57	1	3	198	2.7	22	4391	235	56	8825	246	87	30197	1284	13	2	200	1884	179	78	8	1154	91	9826	2.0	9826	14	1299																				
UNASSIGNED	0	13	0	7	102	0.3	8	309	15	4	445	14	13	1604	65	1	0	10	96	11	2	1	146	9	574	0.2	574	1	101																				
TOTAL QUANTITY	9	70	1	10	300	3	30	4700	250	60	9270	260	100	31800	1349	14	2	210	1980	190	80	9	1300	100	10400	2.2	10400	15	1400																				

ITEM NO.	PARTICIPATING ITEMS																
	1210101	1210102	1210105	1211002	1220027	1400002A	1400004A	1400005A	1400006A	1401102A	1401038A	1401946A	1401977A	1403001A	1403501A	1403504A	1504010A
ITEM	4" WHITE EPOXY RESIN PAVEMENT MARKINGS	4" YELLOW EPOXY RESIN PAVEMENT MARKINGS	EPOXY RESIN PAVEMENT MARKINGS, SYMBOLS, & LEGENDS	REMOVAL OF PAINTED PAVEMENT MARKINGS	CONSTRUCTION SIGNS	TRENCH EXCAVATION 0' - 10" DEEP (SANITARY SEWER)	ROCK-IN-TRENCH EXCAVATION 0' - 10" DEEP (SANITARY SEWER)	TRENCH EXCAVATION 0' - 15" DEEP (SANITARY SEWER)	ROCK-IN-TRENCH EXCAVATION 0' - 15" DEEP (SANITARY SEWER)	8" POLYVINYL CHLORIDE PIPE (SANITARY SEWER)	RECONSTRUCT SANITARY SEWER HOUSE LATERALS	CUT AND PLUG ABANDONED SANITARY SEWER	CONCRETE FOR ENCASMENT AND CRADLE (SANITARY SEWER)	MANHOLE (SANITARY SEWER)	RESET MANHOLE (SAN SEWER)	RECONSTRUCT MANHOLE (SAN SEWER)	TEMPORARY SUPPORT OF UTILITIES
UNIT	L.F.	L.F.	L.F.	L.F.	S.F.	C.Y.	C.Y.	C.Y.	C.Y.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.
SOUTH ST STA 99+57 TO STA 105+00	1010	1020	188	160	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH ST STA 105+00 TO STA 111+00	1150	1106	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH ST STA 111+00 TO STA 117+00	1149	1098	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH ST STA 117+00 TO STA 123+00	1200	1200	0	0	305	16	92	5	325	210	0	1.3	0	1	2	0	0
SOUTH ST STA 123+00 TO STA 129+00	1100	1014	41	0	0	0	0	0	0	0	0	0.0	0	3	3	0	0
SOUTH ST STA 129+00 TO STA 135+00	1150	1104	20	0	95	5	0	0	180	0	0.3	0	0	0	11	0	0
SOUTH ST STA 135+00 TO STA 141+00	1150	1108	20	0	19	1	0	0	0	0	0.1	1	1	1	0	0	0
SOUTH ST STA 141+00 TO STA 146+38	1008	1006	660	236	152	8	0	209	0	2	0.5	1	1	2	0	0	0
SUBTOTAL	8917	8656	968	396	290	1142	61	92	5	533	390	2	2				

GENERAL NOTES

- ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM WITH SECTIONS 2 THRU 18 OF THE CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION, FORM 816, 2004 WITH LATEST REVISIONS UNLESS OTHERWISE SPECIFIED IN THE TECHNICAL SPECIFICATIONS.
- ALL DIMENSIONS ARE FEET UNLESS OTHERWISE NOTED.
- PLANIMETRIC AND TOPOGRAPHIC FEATURES ARE BASED ON FIELD SURVEY PERFORMED BY CARDINAL ENGINEERING ASSOCIATES, FROM 2009 TO 2012. SURVEY BASELINE CONFORMS TO CLASS A-2 HORIZONTAL ACCURACY. STREETLINE AND PROPERTY LINE INFORMATION (IF SHOWN) ARE APPROXIMATE AND BASED ON LIMITED FIELD SURVEY. ALL ELEVATIONS ARE BASED ON NGVD29. HORIZONTAL COORDINATES ARE BASED ON THE CONNECTICUT COORDINATE GRID. VERTICAL ACCURACY IS CLASS T-2.
- ALL DIMENSIONS AND ELEVATIONS MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF MANUFACTURING AND CONSTRUCTION, AND NECESSARY ADJUSTMENTS MADE AS ORDERED BY THE ENGINEER.
- EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED IN ACCORDANCE WITH THE CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION, FORM 816, 2004 WITH LATEST REVISIONS, 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, DEP BULLETIN 34, UNLESS OTHERWISE SPECIFIED IN THE TECHNICAL SPECIFICATIONS.
- THE CONTRACTOR SHALL SUBMIT A DETAILED SCHEDULE WITH A STAGING PLAN AND SEDIMENT AND EROSION CONTROL PLAN FOR APPROVAL PRIOR TO COMMENCING CONSTRUCTION.
- ALL DISTURBED AREAS THAT WILL NOT BE PAVED SHALL RECEIVE 4" OF TOPSOIL AND TURF ESTABLISHMENT.
- THE CONTRACTOR SHALL WALK THE PROJECT PRIOR TO CONSTRUCTION WITH A REPRESENTATIVE FROM THE TOWN AND THE ENGINEER. TREES TO BE REMOVED SHALL BE MARKED IN THE FIELD. EXTREME CARE SHALL BE EXERCISED TO PROTECT ALL TREES NOT DESIGNATED FOR REMOVAL. NO TREES SHALL BE REMOVED UNTIL AUTHORIZATION IS GIVEN BY THE TOWN. COST IS INCLUDED IN THE ITEM "CLEARING AND GRUBBING".
- ANY PHYSICAL FEATURES DISTURBED BY THE CONTRACTOR SHALL BE REPLACED OR RECONSTRUCTED AS DIRECTED BY THE ENGINEER TO A CONDITION EQUAL TO OR BETTER THAN PRIOR TO CONSTRUCTION AT THE CONTRACTORS EXPENSE.
- THE CONTRACTOR SHALL MAINTAIN ALL ROAD NAME SIGNS AS INDICATED ON THE PLANS AND SHALL MAINTAIN ALL TRAFFIC SIGNS AS NEEDED DURING CONSTRUCTION AND AS DIRECTED BY THE ENGINEER. COST IS INCLUDED IN THE ITEM "REMOVAL AND RELOCATION OF EXISTING SIGNS".
- THE UTILITY INFORMATION SHOWN ON THESE PLANS IS BASED ON LIMITED INVESTIGATIONS AND IS IN NO WAY WARRANTED TO INDICATE THE TRUE CONDITIONS OR ACTUAL QUANTITIES OF WORK REQUIRED. LOCATIONS OF EXISTING UTILITIES AND UNDERGROUND STRUCTURES HAVE BEEN COMPILED FROM THE BEST AVAILABLE INFORMATION. THIS INFORMATION WAS COMPILED UTILIZING UTILITY COMPANY & TOWN RECORD MAPS AND FIELD SURVEY AND THEREFORE, IS CONSIDERED TO BE APPROXIMATE. ALL UTILITIES AND UNDERGROUND STRUCTURES MAY NOT BE SHOWN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING THE ACTUAL LOCATION OF ALL UTILITIES. THE TOWN SHALL NOTIFY UTILITY COMPANIES OF NECESSARY RELOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH THAT OF THE UTILITY COMPANIES. UTILITY LINES DAMAGED BY THE CONTRACTOR SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND THE UTILITY COMPANY AND THE COST OF REPAIR WORK SHALL BE BORNE BY THE CONTRACTOR. THE CONTRACTOR SHALL CONTACT CALL BEFORE-U-DIG AT 1-800-922-4455 FOR MARKING OF EXISTING UTILITIES AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF EXCAVATION (MONDAY THROUGH FRIDAY, EXCLUDING HOLIDAYS).
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL PERFORM TEST PITS AS NECESSARY OR AS DIRECTED BY THE ENGINEER TO CONFIRM THE LOCATION OF UTILITIES.
- WATER, GAS, AND SANITARY SEWER SERVICE CONNECTION LOCATIONS ARE APPROXIMATE ONLY. THE ACTUAL LOCATION SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE CONTRACTOR SHALL PERFORM THE REQUIRED SEWER RELOCATIONS AND COORDINATE ANY OTHER REQUIRED RELOCATIONS WITH THE RESPECTIVE UTILITY COMPANIES.
- CONTRACTOR TO SUPPLY UTILITY COMPANIES WITH SUFFICIENT VERTICAL AND HORIZONTAL STAKEOUT OF PROPOSED STORM DRAINAGE, PROPOSED ROADWAY, AND OTHER PROPOSED IMPROVEMENTS TO PERFORM UTILITY RELOCATIONS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE ITEM "CONSTRUCTION STAKING."
- ANTICIPATED UTILITY POLE RELOCATIONS ARE SHOWN ON THE PLANS. ADDITIONAL POLE RELOCATIONS MAY BE REQUIRED. CONTRACTOR TO PROVIDE STAKEOUT OF PROPOSED IMPROVEMENTS PRIOR TO COMMENCEMENT OF WORK TO DETERMINE IF ADDITIONAL POLE RELOCATIONS ARE REQUIRED. POLE RELOCATIONS MAY NOT BE COMPLETED PRIOR TO THE INSTALLATION OF STORM DRAINAGE AND ROADWAY IMPROVEMENTS. THE COST OF THIS WORK SHALL BE INCIDENTAL TO THE PROJECT.
- ALL REQUIRED UTILITY RELOCATIONS FOR GAS, TELEPHONE, CABLE & ELECTRIC FACILITIES SHALL BE PERFORMED BY THE RESPECTIVE UTILITY COMPANY UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES PRIOR TO ANY WORK AND COORDINATE HIS WORK WITH THE UTILITY COMPANY WORK. THE CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY COMPANY FOR THE UTILITY COMPANY TO HOLD ANY POLES THAT NEED TO BE SUPPORTED DURING THE CONTRACTOR'S TRENCHING OPERATIONS. THE COST TO COORDINATE THIS WORK WITH THE UTILITY COMPANIES SHALL BE INCIDENTAL TO THE PROJECT. THERE WILL BE NO COMPENSATION FOR DELAYS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE UTILITY COMPANIES TO RESET ALL UTILITY BOXES TO FINISHED GRADE. THERE WILL BE NO SEPARATE PAYMENT TO COORDINATE THIS WORK OR CLAIM FOR TIME EXTENSION.
- THE UTILITY COMPANIES SHALL RESET ALL WATER AND GAS VALVE BOXES, WATER CURB STOP BOXES AND PRIVATE UTILITY MANHOLES TO FINISHED GRADE. RESETTING SANITARY MANHOLES WILL BE PAID UNDER THE CONTRACT UNIT PRICE.
- FOR LAYOUT PURPOSES, PIPE LENGTHS INDICATED ON THE PLANS ARE FROM CENTER OF CATCH BASIN/MANHOLE TO CENTER OF CATCH BASIN/MANHOLE, FACE OF ENDWALL OR OUTLET END OF FLARED END AND THE LENGTH OF THE FLARED END SECTION IS INCLUDED IN PIPE LENGTH. PAYMENT SHALL BE THE ACTUAL LENGTH INSTALLED MEASURED FROM THE INSIDE FACE OF THE STRUCTURE TO THE INSIDE FACE OF A STRUCTURE OR THE FACE OF AN ENDWALL AND SHALL NOT INCLUDE THE LENGTH OF THE CULVERT END. CULVERT ENDS ARE PAID SEPARATELY.
- ALL TOP OF FRAME ELEVATIONS REFLECT THE ELEVATION WITH THE STANDARD DEPRESSION AS SHOWN ON "DETAILS OF DEPRESSED GUTTER STRIP" AND CTDOT STANDARD SHEETS HW-507.1, HW-507.2, AND HW-507.3 ENTITLED "TYPE 'C', 'C-L' DROP INLET CATCH BASINS", "TYPE 'C', 'C-L' DOUBLE GRATE TYPE I", AND "TYPE 'C', 'C-L' DOUBLE GRATE TYPE II". THE ELEVATION IS APPLIED AT THE FACE OF CURB. OFFSETS NOTED ON THESE PLANS ARE TO THE CENTERLINE OF THE CATCH BASIN STRUCTURE, NOT TO THE FACE OF CURB. THE CENTERLINE OF TYPE 'C' CATCH BASINS (SINGLE GRATE AND DOUBLE GRATE TYPE II) ARE 10 3/16 INCHES IN FRONT OF THE FACE OF CURB. THE CENTERLINE OF TYPE 'C' CATCH BASIN DOUBLE GRATE TYPE I STRUCTURES ARE 18 INCHES IN FRONT OF THE FACE OF CURB.
- RCP SHALL BE CLASS IV UNLESS NOTED OTHERWISE. RCP PIPE WITH LESS THAN 2.0 FEET OF COVER SHALL BE CLASS V. ALL RCP SHALL HAVE PREFORMED PLASTIC OR RUBBER-TYPE GASKETS. PVC PIPE SHALL BE SDR-35 AND INSTALLED IN A TYPE II INSTALLATION WITH BEDDING MATERIAL FROM 4" BELOW (IN EARTH, 12" IN ROCK) TO 12" ABOVE THE PIPE. DUCTILE IRON PIPE SHALL BE CLASS 52.
- ALL EXISTING CONNECTIONS FROM PRIVATE RESIDENCES TO THE TOWN'S STORM SYSTEM WILL BE EVALUATED BY THE DEPARTMENT OF PUBLIC WORKS AND CONNECTED DIRECTLY TO NEW STORM DRAIN SYSTEM PENDING A SIGNED AGREEMENT BY THE PROPERTY OWNER. NO DISCHARGE WILL BE ALLOWED INTO THE STREET.
- ALL EXISTING DRAINAGE PIPES AND CULVERTS WITHIN THE PROJECT SLOPE LIMITS THAT ARE DESIGNATED TO BE REMOVED SHALL BE REMOVED AND BACKFILLED AS SPECIFIED IN SECTION 2.05 "TRENCH EXCAVATION" UNLESS OTHERWISE SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. COORDINATE THIS WORK WITH THE RECONNECTION OF ANY EXISTING FOUNDATION AND OTHER DRAINS TO THE PROPOSED DRAINAGE SYSTEM.
- EXISTING PAVEMENT SHALL BE REMOVED IN FILL AREAS PRIOR TO PLACING FILL. EXISTING PAVEMENT OUTSIDE OF THE CUT AND FILL LIMITS THAT WILL NOT BE USED IN THE PROPOSED CONDITIONS SHALL BE REMOVED. PAYMENT SHALL BE MADE UNDER THE ITEM "EARTH EXCAVATION."
- ALL TRENCHES SHALL BE BACKFILLED AND PAVED DAILY UNLESS OTHERWISE AUTHORIZED BY THE TOWN.
- FRAMES AND COVERS ON ABANDONED MANHOLES SHALL BE REMOVED AND SALVAGED. THEY SHALL BE STORED AND TRANSPORTED TO THE TOWN YARD OR DISPOSED OF AS ORDERED BY THE ENGINEER. THERE WILL BE NO SEPARATE PAYMENT FOR THIS WORK.
- ALL EXCAVATED MATERIALS, CONSTRUCTION EQUIPMENT AND NEW MATERIALS FOR THE WORK SHALL BE PLACED SO AS NOT TO INJURE THE WORK OR ENDANGER PERSONS AND TO ALLOW FREE ACCESS AT ALL TIMES TO ALL PARTS OF THE WORK INCLUDING PUBLIC UTILITY INSTALLATIONS. MATERIALS SHALL BE STORED AT LOCATIONS WHICH WILL CAUSE A MINIMUM OF INCONVENIENCE TO PUBLIC TRAVEL OR THE ADJOINING TENANTS AND MINIMUM DAMAGE TO GRASSED OR OTHERWISE IMPROVED AREAS. LOCATION OF ALL STORED MATERIALS IS SUBJECT TO APPROVAL OF THE ENGINEER AND OWNER.

STANDARD CONVENTIONS

EXISTING		PROPOSED
	APPROXIMATE LIMIT OF CUT SLOPE	
	APPROXIMATE LIMIT OF FILL SLOPE	
	APPROXIMATE PROPERTY LINE	
	APPROXIMATE STREET LINE	
	TAKING LINE	
	BASELINE STATION	
	BITUMINOUS CONCRETE DRIVEWAY	
	BORING NUMBER B10 (SEE BORING LOG SHEET)	
	CATCH BASIN	
	CONTROL POINT	
	CONCRETE DRIVEWAY RAMP, FLARE & SLOPED SIDEWALK	
	CULVERT END	
	DRAINAGE DITCH	
	DRAINAGE PIPE	
	EASEMENT LINE (PERMANENT)	
	EASMENT LINE (TEMPORARY)	
	ELECTRIC LINE (UNDERGROUND)	
	FENCE (CHAIN LINK)	
	FENCE (SPLIT RAIL)	
	FENCE (STOCKADE)	
	GAS LINE	
	GAS TEST PIT	
	GAS VALVE or WATER VALVE	
	HOUSE/ STRUCTURE	
	HYDRANT	
	INLAND WETLAND LIMITS	
	MAILBOX	
	MANHOLE, SANITARY (S), DRAINAGE (D)	
	MONUMENT	
	NORTH ARROW	
	OVERHEAD TELEPHONE, CABLE AND/OR ELECTRIC	
	RETAINING WALL	
	RIPRAP APRON	
	SANITARY SERVICE CONNECTION	
	SANITARY SEWER	
	SEDIMENTATION CONTROL SYSTEM	
	SIGN	
	SPOT ELEVATION	
	STONE WALL	
	TELEPHONE LINE (UNDERGROUND)	
	TREE	
	TREE LINE	
	UNDERDRAIN	
	"U" SHAPED STONE DIKE	
	UTILITY POLE	
	WATER COURSE	
	WATER LINE	
	WATER TEST PIT (TP) / MEASUREMENT AT VALVE (M)	

LIST OF ABBREVIATIONS

AGGR	AGGREGATE	NOM	NOMINAL
AH	AHEAD	NO	NUMBER
A	ALGEBRAIC DIFFERENCE IN GRADES	OF	OUTFALL
APPROX	APPROXIMATE	PERF	PERFORATED
ASPH	ASPHALT	PCPP	PERFORATED CORRUGATED POLYETHYLENE PIPE
BK	BACK	PLNTR	PLANTER
B	BASELINE	POB	POINT OF BEGINNING
BM	BENCHMARK	PCC	POINT OF COMPOUND CURVATURE
BIT	BITUMINOUS	PC	POINT OF CURVATURE
BCLC	BITUMINOUS CONCRETE LIP CURBING	POE	POINT OF ENDING
BC	BOTTOM OF CURB	PGA	POINT OF GRADE APPLICATION
CGR	CABLE GUIDERAIL	PI	POINT OF INTERSECTION
CI / CIP	CAST IRON PIPE	PRC	POINT OF REVERSE CURVE
CB	CATCH BASIN	PT	POINT OF TANGENCY
CL	CENTERLINE	PVC	POINT OF VERTICAL CURVATURE
CC	CONCRETE CURBING	PVCC	POINT OF VERTICAL COMPOUND CURVATURE
CL	CLASS	PVI	POINT OF VERTICAL INTERSECTION
CO	CONDUIT	PVRC	POINT OF VERTICAL REVERSE CURVATURE
CONC	CONCRETE	PVT	POINT OF VERTICAL TANGENCY
CP	CONTROL POINT	POC	POINT ON CURVE
COR	CORNER	POT	POINT ON TANGENT
CMP	CORRUGATED METAL PIPE	PVC	POLYVINYL CHLORIDE PIPE
CPFE	CORRUGATED POLYETHYLENE FLARED END	R	PROPERTY LINE
CPP	CORRUGATED POLYETHYLENE PIPE	R	RADIUS
CY	CUBIC YARD	RR	RAILROAD
DIA	DIAMETER	K	RATE OF VERTICAL CURVATURE
DBL	DOUBLE	REINF	REINFORCED
DRIVE	DRIVEWAY	RCCE	REINFORCED CONCRETE CULVERT END
DI / DIP	DUCTILE IRON PIPE	RCP	REINFORCED CONCRETE PIPE
EA	EACH	REQD	REQUIRED
ESMT	EASEMENT	RT	RIGHT
EOP	EDGE OF PAVEMENT	ROW	RIGHT OF WAY
EL / ELEV	ELEVATION	RSC	RIGID STEEL CONDUIT
EW	ENDWALL	RD	ROAD
EX / EXIST	EXISTING	SAN	SANITARY
FG	FINISHED GRADE	SS	SANITARY SEWER
FP	FLAGPOLE	SED	SEDIMENTATION
FE	FLARED END	SCB	SEDIMENT CONTROL BALES
FL	FLOW LINE	SCS	SEDIMENT CONTROL SYSTEM
FT	FOOT	SHLDR	SHOULDER
FND	FOUND	SF	SQUARE FOOT
FOUND	FOUNDATION	SY	SQUARE YARD
G	GAS	STD	STANDARD
GV	GAS VALVE	STA	STATION
GSC / GC	GRANITE STONE CURBING	SSD	STOPPING SIGHT DISTANCE
HP	HIGH POINT	ST	STREET
HORIZ	HORIZONTAL	SL	STREET LINE
HRS	HOURS	TBD	TO BE DETERMINED
HYD	HYDRANT	TC	TOP OF CURB
INV	INVERT	TF	TOP OF FRAME
IE	INVERT ELEVATION	TYP	TYPICAL
IP	IRON PIN	UDRN	UNDERDRAIN
ISD	INTERSECTION SIGHT DISTANCE	VERT	VERTICAL
LT	LEFT	VC	VERTICAL CURVE
L	LENGTH	VF	VERTICAL FEET
LVC	LENGTH OF VERTICAL CURVE	VCP	VITRIFIED CLAY PIPE
LTP	LIGHT POLE	W	WATER
LF	LINEAR FEET	W/F	WOOD FRAME
LP	LOW POINT	WV	WATER VALVE
LS	LUMP SUM		
MB	MAILBOX		
MH	MANHOLE		
MAX	MAXIMUM		
MBR	METAL BEAM RAIL		
MCE	METAL CULVERT END		
MIN	MINIMUM		
MON	MONUMENT		
N/F	NOW OR FORMERLY		
NTS	NOT TO SCALE		

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

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

DESIGNER/DRAFTER:
AD
CHECKED BY:
ME

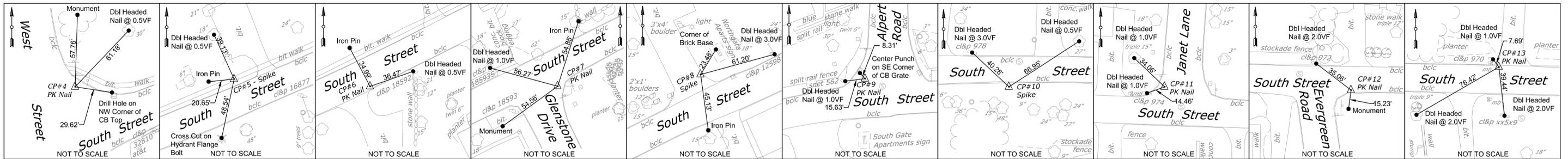
CARDINAL
ENGINEERING ASSOCIATES
3 Colony Street | Meriden, CT 06451 | 203-238-1969
Filename: P:\Civ3d\Proj2014\VernonSouthSt64\Prodwg\GEN 02.dwg

SIGNATURE/
BLOCK:

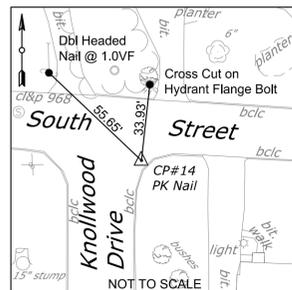
PROJECT TITLE:
**RECONSTRUCTION OF
SOUTH STREET**

TOWN:
VERNON
DRAWING TITLE:
**ABBREVIATIONS,
LEGEND & GENERAL NOTES**

PROJECT NO.
146-195
DRAWING NO.
GEN 02
SHEET NO.
01 03



CONTROL POINT #4 N 372,066.30 E 677,205.89	CONTROL POINT #5 N 372,179.12 E 677,521.04	CONTROL POINT #6 N 372,274.64 E 677,802.67	CONTROL POINT #7 N 372,386.17 E 678,038.22	CONTROL POINT #8 N 372,564.49 E 678,308.69	CONTROL POINT #9 N 372,710.95 E 678,713.49	CONTROL POINT #10 N 372,687.21 E 679,043.85	CONTROL POINT #11 N 372,703.74 E 679,524.97	CONTROL POINT #12 N 372,670.02 E 679,786.71	CONTROL POINT #13 N 372,683.90 E 680,038.37
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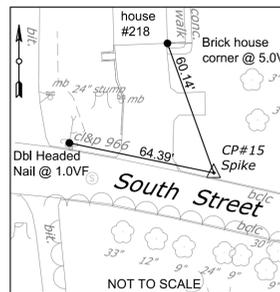


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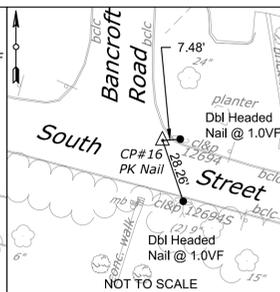


BEGIN STATE PROJECT NO. 146-195
FEDERAL PROJECT NO. 1146 (111)
SOUTH STREET STA 99+57

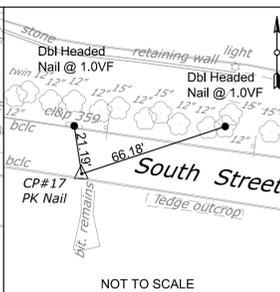
END STATE PROJECT NO. 146-195
FEDERAL PROJECT NO. 1146 (111)
SOUTH STREET STA 146+37.71



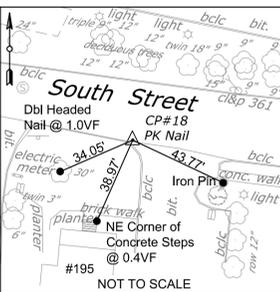
CONTROL POINT #15 N 372,649.24 E 680,630.16



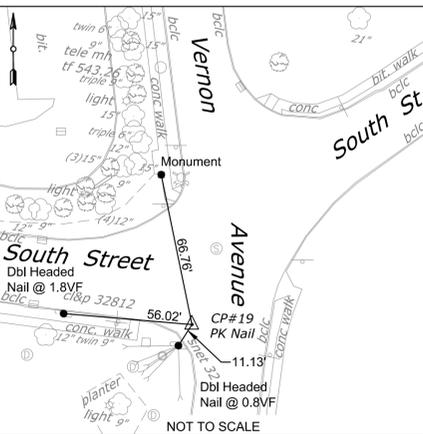
CONTROL POINT #16 N 372,560.60 E 680,972.06



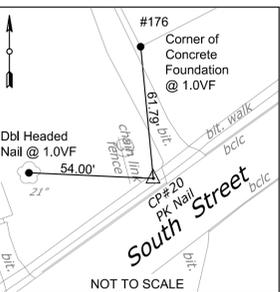
CONTROL POINT #17 N 372,487.68 E 681,232.12



CONTROL POINT #18 N 372,454.22 E 681,425.51



CONTROL POINT #19 N 372,415.69 E 681,703.98



CONTROL POINT #20 N 372,622.68 E 681,923.28

BENCHMARK		
NUMBER	DESCRIPTION	ELEVATION
BM 1	PK NAIL AT 1.0 VF ON CL&P POLE 3 - 10	447.29
BM 2	PK NAIL AT 1.0 VF ON CL&P POLE 6982	460.04
BM 4	CROSS CUT ON HYDRANT FLANGE BOLT IN FRONT OF HOUSE 321	473.70
BM 7	PK NAIL AT 1.0 VF ON CL&P POLE 18593	510.00
BM 8	PK NAIL AT 1.0 VF ON CL&P POLE 18715	512.25
BM 9	PK NAIL AT 1.0 VF ON BACK OF SNET POLE 563	503.11
BM 10	PK NAIL AT 1.0 VF ON SNET POLE 562	507.18
BM 11	PK NAIL AT 1.0 VF ON BACK OF SNET POLE 560	516.83
BM 14	PK NAIL AT 1.0 VF ON CL&P POLE 976	552.53
BM 15	CROSS CUT ON HYDRANT FLANGE BOLT IN FRONT OF HOUSE 283	559.71
BM 16	PK NAIL AT 0.5 VF ON CL&P POLE 973	565.74
BM 17	PK NAIL AT 1.0 VF ON CL&P POLE 971	574.05
BM 19	CROSS CUT ON HYDRANT FLANGE BOLT OPPOSITE OF KNOLLWOOD DRIVE	597.09
BM 20	PK NAIL AT 1.0 VF ON CL&P POLE 12696	594.97
BM 21	PK NAIL AT 1.0 VF ON CL&P POLE 12695	587.50
BM 22	PK NAIL AT 1.0 VF ON CL&P POLE 12694	577.67
BM 23	CROSS CUT ON HYDRANT FLANGE BOLT IN FRONT OF HOUSE 208	573.15
BM 26	PK NAIL AT 1.0 VF ON CL&P POLE 360	552.17
BM 27	PK NAIL AT 1.0 VF ON BACK OF CL&P POLE 361	545.74
BM 28	PK NAIL AT 1.0 VF ON CL&P POLE 32812	544.04
BM 29	CROSS CUT ON HYDRANT FLANGE BOLT AT CORNER OF VERNON AVENUE	545.75

NOTE: CONTROL POINT TIE BOXES ARE NOT TO SCALE.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

DESIGNER/DRAFTER:
AD
CHECKED BY:
ME
SCALE IN FEET
0 160 320
SCALE 1" = 160'

CARDINAL
ENGINEERING ASSOCIATES
3 Colony Street | Meriden, CT 06451 | 203-238-1969
File name: P:\Civ\3d\Proj2009\VernonSouthSt64\SourceDwgs\VFG-SouthStCL-(4)-(3).dwg

SIGNATURE/
BLOCK:

PROJECT TITLE:
**RECONSTRUCTION OF
SOUTH STREET**

TOWN: VERNON	PROJECT NO. 146-195
DRAWING TITLE: SURVEY DATA & INDEX PLAN	DRAWING NO. INX 01
	SHEET NO. 03 02

P:\Civ\3d\Proj2009\VernonSouthSt64\SourceDwgs\VFG-SouthStCL-(4)-(3).dwg, 03/02/2016 12:11:28 PM, DWG to PDF.pcpl, ANSI (landscape) D (34.00 x 22.00 inches)

DRILLER Trent Roew		INSPECTOR Michael St. John		Hole No. B-1	
TOWN: Vernon, CT		TOWN: Vernon, CT		Line 100+00	
PROJECT NAME: South Street Reconstruction Project		PROJECT NAME: South Street Reconstruction Project		Station 16' Rt.	
PROJECT NUMBER: State Project No. 146-195		PROJECT NUMBER: State Project No. 146-195		Offset 16' Rt.	
Earth Design Associates, Inc.		Earth Design Associates, Inc.		N. Coordinate 372204.2	
Boring Contractor: New England Boring Contractors of CT.		Boring Contractor: New England Boring Contractors of CT.		E. Coordinate 677234.8	
Client: Cardinal Engineering Associates, Inc.		Client: Cardinal Engineering Associates, Inc.			
Surface Elevation (f): 443.81		Surface Elevation (f): 443.81		Surface Elevation (f): 443.81	
Date Started: 10/23/15		Date Started: 10/23/15		Date Started: 10/23/15	
Date Finished: 10/23/15		Date Finished: 10/23/15		Date Finished: 10/23/15	
Groundwater Observations		Groundwater Observations		Groundwater Observations	
@ Dry 1 after 0 hours		@ Dry 1 after 0 hours		@ Dry 1 after 0 hours	
@ 1 after 0 hours		@ 1 after 0 hours		@ 1 after 0 hours	
SAMPLE		SAMPLE		SAMPLE	
DEPTH IN FEET FROM-TO		DEPTH IN FEET FROM-TO		DEPTH IN FEET FROM-TO	
NO.		NO.		NO.	
PEN. F.		PEN. F.		PEN. F.	
REC. F.		REC. F.		REC. F.	
Type		Type		Type	
Blows per 6 inches or ROD		Blows per 6 inches or ROD		Blows per 6 inches or ROD	
STRATA CHANGE: DEPTH, ELEV.		STRATA CHANGE: DEPTH, ELEV.		STRATA CHANGE: DEPTH, ELEV.	
FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)		FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)		FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)	
443.8 0.5 443.3 1.0 442.8		443.8 0.5 443.3 1.0 442.8		443.8 0.5 443.3 1.0 442.8	
Asphalt, 6".		Asphalt, 6".		Asphalt, 6".	
Basecourse, sand and gravel.		Basecourse, sand and gravel.		Basecourse, sand and gravel.	
Brown fine to coarse SAND, some gravel, trace silt.		Brown fine to coarse SAND, some gravel, trace silt.		Brown fine to coarse SAND, some gravel, trace silt.	
13,10,6,6		13,10,6,6		13,10,6,6	
3		3		3	
2.0-4.0		2.0-4.0		2.0-4.0	
2		2		2	
2.0-0.8		2.0-0.8		2.0-0.8	
SS		SS		SS	
4,6,8,19		4,6,8,19		4,6,8,19	
5.0		5.0		5.0	
6		6		6	
5.0-7.0		5.0-7.0		5.0-7.0	
3		3		3	
2.0-0.7		2.0-0.7		2.0-0.7	
SS		SS		SS	
40,95		40,95		40,95	
7.0		7.0		7.0	
436.8		436.8		436.8	
Brown fine SAND, some gravel, trace little silt, trace cobble, -GLACIAL TILL.		Brown fine SAND, some gravel, trace little silt, trace cobble, -GLACIAL TILL.		Brown fine SAND, some gravel, trace little silt, trace cobble, -GLACIAL TILL.	
10.0		10.0		10.0	
433.8		433.8		433.8	
10.6		10.6		10.6	
433.2		433.2		433.2	
Possible weathered rock		Possible weathered rock		Possible weathered rock	
End of boring at 10'7".		End of boring at 10'7".		End of boring at 10'7".	
Casing		Casing		Casing	
Size From To		Size From To		Size From To	
Feet of Earth Rock		Feet of Earth Rock		Feet of Earth Rock	
10.6 f 0.0 f		10.6 f 0.0 f		10.6 f 0.0 f	
No. of Samples		No. of Samples		No. of Samples	
3		3		3	
NOTES:		NOTES:		NOTES:	
SAMPLE TYPE CODING: D=Driven C=Core A=Auger UP=Undisturbed Piston V=Vane Test		SAMPLE TYPE CODING: D=Driven C=Core A=Auger UP=Undisturbed Piston V=Vane Test		SAMPLE TYPE CODING: D=Driven C=Core A=Auger UP=Undisturbed Piston V=Vane Test	
PROPORTIONS USED: Trace = 1 - 10%, Little = 10 - 20%, SOME = 20 - 35%, And = 35 - 50%		PROPORTIONS USED: Trace = 1 - 10%, Little = 10 - 20%, SOME = 20 - 35%, And = 35 - 50%		PROPORTIONS USED: Trace = 1 - 10%, Little = 10 - 20%, SOME = 20 - 35%, And = 35 - 50%	
Sheet 1 Of 1		Sheet 1 Of 1		Sheet 1 Of 1	

DRILLER Michael St. John		INSPECTOR Michael St. John		Hole No. B-2	
TOWN: Vernon, CT		TOWN: Vernon, CT		Line 0+64	
PROJECT NAME: South Street Reconstruction Project		PROJECT NAME: South Street Reconstruction Project		Station 10' Rt.	
PROJECT NUMBER: State Project No. 146-195		PROJECT NUMBER: State Project No. 146-195		Offset 10' Rt.	
Earth Design Associates, Inc.		Earth Design Associates, Inc.		N. Coordinate 372205.2	
Boring Contractor: New England Boring Contractors of CT.		Boring Contractor: New England Boring Contractors of CT.		E. Coordinate 677295.2	
Client: Cardinal Engineering Associates, Inc.		Client: Cardinal Engineering Associates, Inc.			
Surface Elevation (f): 478.59		Surface Elevation (f): 478.59		Surface Elevation (f): 478.59	
Date Started: 10/19/15		Date Started: 10/19/15		Date Started: 10/19/15	
Date Finished: 10/19/15		Date Finished: 10/19/15		Date Finished: 10/19/15	
Groundwater Observations		Groundwater Observations		Groundwater Observations	
@ Dry 1 after 0 hours		@ Dry 1 after 0 hours		@ Dry 1 after 0 hours	
@ 1 after 0 hours		@ 1 after 0 hours		@ 1 after 0 hours	
SAMPLE		SAMPLE		SAMPLE	
DEPTH IN FEET FROM-TO		DEPTH IN FEET FROM-TO		DEPTH IN FEET FROM-TO	
NO.		NO.		NO.	
PEN. F.		PEN. F.		PEN. F.	
REC. F.		REC. F.		REC. F.	
Type		Type		Type	
Blows per 6 inches or ROD		Blows per 6 inches or ROD		Blows per 6 inches or ROD	
STRATA CHANGE: DEPTH, ELEV.		STRATA CHANGE: DEPTH, ELEV.		STRATA CHANGE: DEPTH, ELEV.	
FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)		FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)		FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)	
20.21, 0.0 19.17,		20.21, 0.0 19.17,		20.21, 0.0 19.17,	
Asphalt, 3"		Asphalt, 3"		Asphalt, 3"	
Base, sand gravel, 2".		Base, sand gravel, 2".		Base, sand gravel, 2".	
Red brown SILT and fine to coarse SAND, little fine gravel		Red brown SILT and fine to coarse SAND, little fine gravel		Red brown SILT and fine to coarse SAND, little fine gravel	
16,18, 17,17		16,18, 17,17		16,18, 17,17	
2		2		2	
2.0-1.5		2.0-1.5		2.0-1.5	
SS		SS		SS	
20,23, 24,29		20,23, 24,29		20,23, 24,29	
2		2		2	
2.0-1.0		2.0-1.0		2.0-1.0	
SS		SS		SS	
4.0		4.0		4.0	
-4.0		-4.0		-4.0	
6		6		6	
5.0-7.0		5.0-7.0		5.0-7.0	
3		3		3	
2.0-1.3		2.0-1.3		2.0-1.3	
SS		SS		SS	
21,23, 22,29		21,23, 22,29		21,23, 22,29	
8.0		8.0		8.0	
-8.0		-8.0		-8.0	
Red brown fine to coarse GRAVEL and fine SAND, trace silt. Auger refusal at 8'; moist at bottom. -GLACIAL TILL		Red brown fine to coarse GRAVEL and fine SAND, trace silt. Auger refusal at 8'; moist at bottom. -GLACIAL TILL		Red brown fine to coarse GRAVEL and fine SAND, trace silt. Auger refusal at 8'; moist at bottom. -GLACIAL TILL	
End of boring at 8'.		End of boring at 8'.		End of boring at 8'.	
Casing		Casing		Casing	
Size From To		Size From To		Size From To	
Feet of Earth Rock		Feet of Earth Rock		Feet of Earth Rock	
8.0 f 0.0 f		8.0 f 0.0 f		8.0 f 0.0 f	
No. of Samples		No. of Samples		No. of Samples	
3		3		3	
NOTES:		NOTES:		NOTES:	
SAMPLE TYPE CODING: D=Driven C=Core A=Auger UP=Undisturbed Piston V=Vane Test		SAMPLE TYPE CODING: D=Driven C=Core A=Auger UP=Undisturbed Piston V=Vane Test		SAMPLE TYPE CODING: D=Driven C=Core A=Auger UP=Undisturbed Piston V=Vane Test	
PROPORTIONS USED: Trace = 1 - 10%, Little = 10 - 20%, SOME = 20 - 35%, And = 35 - 50%		PROPORTIONS USED: Trace = 1 - 10%, Little = 10 - 20%, SOME = 20 - 35%, And = 35 - 50%		PROPORTIONS USED: Trace = 1 - 10%, Little = 10 - 20%, SOME = 20 - 35%, And = 35 - 50%	
Sheet 1 Of 1		Sheet 1 Of 1		Sheet 1 Of 1	

DRILLER Michael St. John		INSPECTOR Michael St. John		Hole No. B-3	
TOWN: Vernon, CT		TOWN: Vernon, CT		Line 103+70	
PROJECT NAME: South Street Reconstruction Project		PROJECT NAME: South Street Reconstruction Project		Station 6' Lt.	
PROJECT NUMBER: State Project No. 146-195		PROJECT NUMBER: State Project No. 146-195		Offset 10' Rt.	
Earth Design Associates, Inc.		Earth Design Associates, Inc.		N. Coordinate 372187.8	
Boring Contractor: New England Boring Contractors of CT.		Boring Contractor: New England Boring Contractors of CT.		E. Coordinate 677570.4	
Client: Cardinal Engineering Associates, Inc.		Client: Cardinal Engineering Associates, Inc.			
Surface Elevation (f): 478.59		Surface Elevation (f): 478.59		Surface Elevation (f): 478.59	
Date Started: 10/19/15		Date Started: 10/19/15		Date Started: 10/19/15	
Date Finished: 10/19/15		Date Finished: 10/19/15		Date Finished: 10/19/15	
Groundwater Observations		Groundwater Observations		Groundwater Observations	
@ Dry 1 after 0 hours		@ Dry 1 after 0 hours		@ Dry 1 after 0 hours	
@ 1 after 0 hours		@ 1 after 0 hours		@ 1 after 0 hours	
SAMPLE		SAMPLE		SAMPLE	
DEPTH IN FEET FROM-TO		DEPTH IN FEET FROM-TO		DEPTH IN FEET FROM-TO	
NO.		NO.		NO.	
PEN. F.		PEN. F.		PEN. F.	
REC. F.		REC. F.		REC. F.	
Type		Type		Type	
Blows per 6 inches or ROD		Blows per 6 inches or ROD		Blows per 6 inches or ROD	
STRATA CHANGE: DEPTH, ELEV.		STRATA CHANGE: DEPTH, ELEV.		STRATA CHANGE: DEPTH, ELEV.	
FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)		FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)		FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)	
38,41, 0.2 22,18		38,41, 0.2 22,18		38,41, 0.2 22,18	
Asphalt, 5"		Asphalt, 5"		Asphalt, 5"	
Base gravel, 3"		Base gravel, 3"		Base gravel, 3"	
Brown fine to coarse SAND, little fine gravel, trace silt.		Brown fine to coarse SAND, little fine gravel, trace silt.		Brown fine to coarse SAND, little fine gravel, trace silt.	
20,23, 24,29		20,23, 24,29		20,23, 24,29	
2		2		2	
2.0-1.5		2.0-1.5		2.0-1.5	
SS		SS		SS	
4.0		4.0		4.0	
-4.0		-4.0		-4.0	
6		6		6	
5.0-7.0		5.0-7.0		5.0-7.0	
3		3		3	
2.0-1.5		2.0-1.5		2.0-1.5	
SS		SS		SS	
18,18, 21,22		18,18, 21,22		18,18, 21,22	
Brown fine SAND, little coarse sand, trace silt, trace fine gravel.		Brown fine SAND, little coarse sand, trace silt, trace fine gravel.		Brown fine SAND, little coarse sand, trace silt, trace fine gravel.	
8.0-10.0		8.0-10.0		8.0-10.0	
4		4		4	
2.0-1.7		2.0-1.7		2.0-1.7	
SS		SS		SS	
22,25, 22,31		22,25, 22,31		22,25, 22,31	
End of boring at 10'.		End of boring at 10'.		End of boring at 10'.	
Casing		Casing		Casing	
Size From To		Size From To		Size From To	
Feet of Earth Rock		Feet of Earth Rock		Feet of Earth Rock	
10.0 f 0.0 f		10.0 f 0.0 f		10.0 f 0.0 f	
No. of Samples		No. of Samples		No. of Samples	
3		3		3	
NOTES:		NOTES:		NOTES:	
SAMPLE TYPE CODING: D=Driven C=Core A=Auger UP=Undisturbed Piston V=Vane Test		SAMPLE TYPE CODING: D=Driven C=Core A=Auger UP=Undisturbed Piston V=Vane Test		SAMPLE TYPE CODING: D=Driven C=Core A=Auger UP=Undisturbed Piston V=Vane Test	
PROPORTIONS USED: Trace = 1 - 10%, Little = 10 - 20%, SOME = 20 - 35%, And = 35 - 50%		PROPORTIONS USED: Trace = 1 - 10%, Little = 10 - 20%, SOME = 20 - 35%, And = 35 - 50%		PROPORTIONS USED: Trace = 1 - 10%, Little = 10 - 20%, SOME = 20 - 35%, And = 35 - 50%	
Sheet 1 Of 1		Sheet 1 Of 1		Sheet 1 Of 1	

DRILLER Michael St. John		INSPECTOR Michael St. John		Hole No. B-4	
TOWN: Vernon, CT		TOWN: Vernon, CT		Line 104+51	
PROJECT NAME: South Street Reconstruction Project		PROJECT NAME: South Street Reconstruction Project		Station 12' Rt.	
PROJECT NUMBER: State Project No. 146-195		PROJECT NUMBER: State Project No. 146-195		Offset 12' Rt.	
Earth Design Associates, Inc.		Earth Design Associates, Inc.		N. Coordinate 372203.4	
Boring Contractor: New England Boring Contractors of CT.		Boring Contractor: New England Boring Contractors of CT.		E. Coordinate 677651.6	
Client: Cardinal Engineering Associates, Inc.		Client: Cardinal Engineering Associates, Inc.			
Surface Elevation (f): 485.11		Surface Elevation (f): 485.11		Surface Elevation (f): 485.11	
Date Started: 10/16/15		Date Started: 10/16/15		Date Started: 10/16/15	
Date Finished: 10/16/15		Date Finished: 10/16/15		Date Finished: 10/16/15	
Groundwater Observations		Groundwater Observations		Groundwater Observations	
@ Dry 1 after 0 hours		@ Dry 1 after 0 hours		@ Dry 1 after 0 hours	
@ 1 after 0 hours		@ 1 after 0 hours		@ 1 after 0 hours	
SAMPLE		SAMPLE		SAMPLE	
DEPTH IN FEET FROM-TO		DEPTH IN FEET FROM-TO		DEPTH IN FEET FROM-TO	
NO.		NO.		NO.	
PEN. F.		PEN. F.		PEN. F.	
REC. F.		REC. F.		REC. F.	
Type		Type		Type	
Blows per 6 inches or ROD		Blows per 6 inches or ROD		Blows per 6 inches or ROD	
STRATA CHANGE: DEPTH, ELEV.		STRATA CHANGE: DEPTH, ELEV.		STRATA CHANGE: DEPTH, ELEV.	
FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)		FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)		FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)	
12,14, 0.4 18,21		12,14, 0.4 18,21		12,14, 0.4 18,21	
Asphalt, 4.5"		Asphalt, 4.5"		Asphalt, 4.5"	
Base gravel, 2".		Base gravel, 2".		Base gravel, 2".	
Red brown fine to coarse SAND, some silt, little fine gravel.		Red brown fine to coarse SAND, some silt, little fine gravel.		Red brown fine to coarse SAND, some silt, little fine gravel.	
20,24, 16,17		20,24, 16,17		20,24, 16,17	
2		2		2	
2.0-1.5		2.0-1.5		2.0-1.5	
SS		SS		SS	
19,27, 35,48		19,27, 35,48		19,27, 35,48	
3		3		3	
2.0-1.7		2.0-1.7		2.0-1.7	
SS		SS		SS	
10.0		10.0		10.0	
475.1		475.			

DRILLER Michael St. John, INSPECTOR IEO, SOILS ENGINEER Earth Design Associates, Inc. Boring Contractor: New England Boring Contractors of CT. Client: Cardinal Engineering Associates, Inc. Surface Elevation (f): 506.39, Date Started: 10/19/15, Date Finished: 10/19/15. Includes logs for depths 0.0-2.0, 2.0-4.0, 5.0-7.0, 10.0-12.0.

DRILLER Michael St. John, INSPECTOR IEO, SOILS ENGINEER Earth Design Associates, Inc. Boring Contractor: New England Boring Contractors of CT. Client: Cardinal Engineering Associates, Inc. Surface Elevation (f): 523.34, Date Started: 10/20/15, Date Finished: 10/20/15. Includes logs for depths 0.0-2.0, 2.0-4.0, 5.0-7.0, 8.0-10.0.

DRILLER Michael St. John, INSPECTOR IEO, SOILS ENGINEER Earth Design Associates, Inc. Boring Contractor: New England Boring Contractors of CT. Client: Cardinal Engineering Associates, Inc. Surface Elevation (f): 523.34, Date Started: 10/20/15, Date Finished: 10/20/15. Includes logs for depths 0.0-2.0, 2.0-4.0, 5.0-7.0, 10.0-12.0.

DRILLER Michael St. John, INSPECTOR IEO, SOILS ENGINEER Earth Design Associates, Inc. Boring Contractor: New England Boring Contractors of CT. Client: Cardinal Engineering Associates, Inc. Surface Elevation (f): 523.34, Date Started: 10/20/15, Date Finished: 10/20/15. Includes logs for depths 0.0-2.0, 2.0-4.0, 5.0-7.0, 10.0-12.0.

DRILLER Mike St. John, INSPECTOR IEO, SOILS ENGINEER Earth Design Associates, Inc. Boring Contractor: New England Boring Contractors of CT. Client: Cardinal Engineering Associates, Inc. Surface Elevation (f): 553.40, Date Started: 10/20/15, Date Finished: 10/20/15. Includes logs for depths 0.0-2.0, 2.0-4.0, 5.0-7.0, 10.0-12.0.

DRILLER Walter Hoeckle, INSPECTOR IEO, SOILS ENGINEER Earth Design Associates, Inc. Boring Contractor: New England Boring Contractors of CT. Client: Cardinal Engineering Associates, Inc. Surface Elevation (f): 564.05, Date Started: 10/16/15, Date Finished: 10/16/15. Includes logs for depths 0.0-2.0, 2.0-4.0, 5.0-7.0, 10.0-12.0.

DRILLER Walter Hoeckle, INSPECTOR IEO, SOILS ENGINEER Earth Design Associates, Inc. Boring Contractor: New England Boring Contractors of CT. Client: Cardinal Engineering Associates, Inc. Surface Elevation (f): 581.32, Date Started: 10/16/15, Date Finished: 10/16/15. Includes logs for depths 0.0-2.0, 2.0-4.0, 5.0-7.0, 10.0-12.0.

DRILLER Trent Row, INSPECTOR IEO, SOILS ENGINEER Earth Design Associates, Inc. Boring Contractor: New England Boring Contractors of CT. Client: Cardinal Engineering Associates, Inc. Surface Elevation (f): 593.60, Date Started: 10/23/15, Date Finished: 10/23/15. Includes logs for depths 0.0-2.0, 2.0-4.0, 5.0-7.0, 10.0-12.0.

DRILLER Mike St. John, INSPECTOR IEO, SOILS ENGINEER Earth Design Associates, Inc. Boring Contractor: New England Boring Contractors of CT. Client: Cardinal Engineering Associates, Inc. Surface Elevation (f): 553.40, Date Started: 10/20/15, Date Finished: 10/20/15. Includes logs for depths 0.0-2.0, 2.0-4.0, 5.0-7.0, 10.0-12.0.

DRILLER Walter Hoeckle, INSPECTOR IEO, SOILS ENGINEER Earth Design Associates, Inc. Boring Contractor: New England Boring Contractors of CT. Client: Cardinal Engineering Associates, Inc. Surface Elevation (f): 564.05, Date Started: 10/16/15, Date Finished: 10/16/15. Includes logs for depths 0.0-2.0, 2.0-4.0, 5.0-7.0, 10.0-12.0.

DRILLER Walter Hoeckle, INSPECTOR IEO, SOILS ENGINEER Earth Design Associates, Inc. Boring Contractor: New England Boring Contractors of CT. Client: Cardinal Engineering Associates, Inc. Surface Elevation (f): 581.32, Date Started: 10/16/15, Date Finished: 10/16/15. Includes logs for depths 0.0-2.0, 2.0-4.0, 5.0-7.0, 10.0-12.0.

DRILLER Trent Row, INSPECTOR IEO, SOILS ENGINEER Earth Design Associates, Inc. Boring Contractor: New England Boring Contractors of CT. Client: Cardinal Engineering Associates, Inc. Surface Elevation (f): 593.60, Date Started: 10/23/15, Date Finished: 10/23/15. Includes logs for depths 0.0-2.0, 2.0-4.0, 5.0-7.0, 10.0-12.0.

Notes and sample type coding for Hole No. B-9. Includes proportions used: Trace = 1-10%, Little = 10-20%, SOME = 20-35%, And = 35-50%.

Notes and sample type coding for Hole No. B-10. Includes proportions used: Trace = 1-10%, Little = 10-20%, SOME = 20-35%, And = 35-50%.

Notes and sample type coding for Hole No. B-11. Includes proportions used: Trace = 1-10%, Little = 10-20%, SOME = 20-35%, And = 35-50%.

Notes and sample type coding for Hole No. B-12. Includes proportions used: Trace = 1-10%, Little = 10-20%, SOME = 20-35%, And = 35-50%.

Revision table with columns for REV, DATE, REVISION DESCRIPTION, SHEET NO. Includes a note about information including estimated quantities of work.

DESIGNER/DRAFTER: AD, CHECKED BY: ME. Logo for CARDINAL ENGINEERING ASSOCIATES, 3 Colony Street | Meriden, CT 06451 | 203-238-1969.

SIGNATURE/BLOCK: PROJECT TITLE: RECONSTRUCTION OF SOUTH STREET.

TOWN: VERNON, DRAWING TITLE: BORING LOGS, SHEET NO. 03 04.

DRILLER Michael St. John		Hole No. B-26	
INSPECTOR IOO		Line Station 141+23 Offset 7' Rt.	
SOILS ENGINEER Earth Design Associates, .		PROJECT NAME: South Street Reconstruction Project PROJECT NUMBER: State Project No. 146-195 N. Coordinate 372492.1 E. Coordinate 681193.4	
TOWN: Vernon, CT		Client: Cardinal Engineering Associates, Inc.	
Boring Contractor: New England Boring Contractors of CT.		Client: Cardinal Engineering Associates, Inc.	
Surface Elevation (f): 562.86		Utilized	
Date Started: 10/20/15		Type	
Date Finished: 10/20/15		BW NW HW FJ Solid Hollow	
Groundwater Observations		Size I.D. (in) 2 1/2 3 4 4 3 (1/4) 3 1 3/8	
@ Dry 1 after 0 hours		Hammer (bls) 300 300 300 300	
@ 1 after 0 hours		Fall (in) 30 30 30 24	
Casing		Auger Mud Sampler Core Barrel	
D E P T H		SAMPLE	
Casing blows per foot		DEPTH IN FEET FROM - TO	
NO.		PEN. F. REC. F. Type	
Blows per 6 inches or RGD		STRATA CHANGE: DEPTH, ELEV.	
FIELD IDENTIFICATION OF SOIL REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)			
0		Asphalt, 3". Base coarse, SAND and GRAVEL 2".	
14.17, 12.12		562.9 0.3 562.6	
2.0		2.0	
2.0-4.0		2.0 SS 7,8,11, 16	
3		Red brown SILT, some medium to fine sand, little medium to fine gravel.	
4.0		558.9	
5.0-7.0		3 2.0 SS 50/1*	
6		Augered to 3'; auger gridding at 3'; top of weathered rock at 5'; augered from 5 to 7' in rock; cored from 7 to 12'.	
7.0		7.0	
7.0-12.0		RC-1 5.0 1.0 RC 0	
9		555.9	
Micaceous SCHIST and GRANITE GNEISS, soft, gray to greenish, gray, angular joints and fractures, fractures along bedding plane.			
12.0		12.0	
1550.9		End of boring at 12'.	
15			
Casing		Feet of	
Size From To		Earth Rock	
7.0 f 5.0 f		4	
No. of Samples		NOTES: Water introduced into borehole during rock coring operations.	
SAMPLE TYPE CODING: D=Driven C=Core A=Auger UP=Undisturbed Piston V=Vane Test		Hole No. B-26	
PROPORTIONS USED: Trace = 1 - 10%, Little = 10 - 20%, SOME = 20 - 35%, And = 35 - 50%		Sheet 1 Of 1	

DRILLER Walter Hoeckle		Hole No. B-27	
INSPECTOR IOO		Line Station 141+20 Offset 27' Rt.	
SOILS ENGINEER Earth Design Associates, .		PROJECT NAME: South Street Reconstruction Project PROJECT NUMBER: State Project No. 146-195 N. Coordinate E. Coordinate	
TOWN: Vernon, CT		Client: Cardinal Engineering Associates, Inc.	
Boring Contractor: New England Boring Contractors of CT.		Client: Cardinal Engineering Associates, Inc.	
Surface Elevation (f):		Utilized	
Date Started: 10/15/15		Type	
Date Finished: 10/15/15		BW NW HW FJ Solid Hollow	
Groundwater Observations		Size I.D. (in) 2 1/2 3 4 4 3 (1/4) 3 1 3/8	
@ Dry 1 after 0 hours		Hammer (bls) 300 300 300 300	
@ 1 after 0 hours		Fall (in) 30 30 30 24	
Casing		Auger Mud Sampler Core Barrel	
D E P T H		SAMPLE	
Casing blows per foot		DEPTH IN FEET FROM - TO	
NO.		PEN. F. REC. F. Type	
Blows per 6 inches or RGD		STRATA CHANGE: DEPTH, ELEV.	
FIELD IDENTIFICATION OF SOIL REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)			
0		0.0 0.3 -0.3	
1.0-3.0		1 2.0 0.8 SS 1,4,7,9	
3		Topsoil, 4", trace roots. Fine SAND and SILT, little to some clay, trace rock fragments	
5.0-7.0		2 2.0 0.6 SS 51,55, 38,39	
6		Red brown coarse to fine SAND and SILT, little medium to fine gravel; trace rock fragments; auger gridding from 8 to 8.5'; auger refusal at 9'. -GLACIAL TILL	
9		9.0 -9.0	
12		End of boring at 9'.	
15			
Casing		Feet of	
Size From To		Earth Rock	
9.0 f 5.0 f		2	
No. of Samples		NOTES: Due to access problems, boring offset 7.5' W of staked location.	
SAMPLE TYPE CODING: D=Driven C=Core A=Auger UP=Undisturbed Piston V=Vane Test		Hole No. B-27	
PROPORTIONS USED: Trace = 1 - 10%, Little = 10 - 20%, SOME = 20 - 35%, And = 35 - 50%		Sheet 1 Of 1	

DRILLER Walter Hoeckle		Hole No. B-28	
INSPECTOR IOO		Line Station 142+06 Offset 35' Rt.	
SOILS ENGINEER Earth Design Associates, .		PROJECT NAME: South Street Reconstruction Project PROJECT NUMBER: State Project No. 146-195 N. Coordinate 372452.6 E. Coordinate 681272.1	
TOWN: Vernon, CT		Client: Cardinal Engineering Associates, Inc.	
Boring Contractor: New England Boring Contractors of CT.		Client: Cardinal Engineering Associates, Inc.	
Surface Elevation (f):		Utilized	
Date Started: 10/15/15		Type	
Date Finished: 10/16/15		BW NW HW FJ Solid Hollow	
Groundwater Observations		Size I.D. (in) 2 1/2 3 4 4 3 (1/4) 3 1 3/8	
@ Dry 1 after 0 hours		Hammer (bls) 300 300 300 300	
@ 1 after 0 hours		Fall (in) 30 30 30 24	
Casing		Auger Mud Sampler Core Barrel	
D E P T H		SAMPLE	
Casing blows per foot		DEPTH IN FEET FROM - TO	
NO.		PEN. F. REC. F. Type	
Blows per 6 inches or RGD		STRATA CHANGE: DEPTH, ELEV.	
FIELD IDENTIFICATION OF SOIL REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)			
0		0.0 0.3 -0.3	
1.0-3.0		1 2.0 0.9 SS 3,7,5,7	
3		Topsoil, 3". Red brown fine to medium SAND and SILT, trace medium to fine gravel, trace cobble.	
5.0-5.0		2 0.0 0.0 SS 75/0.25*	
6		6.0	
6.0-8.0		3 2.0 1.7 SS 14,12, 13,18	
9		Drove casing to 4', roller bit to 4.5'. Augered from 4.5 to 5'; sample with split spoon at 5'; spoon refusal. Augered to 6' and rock from 6' to 11'.	
11.0		8.0	
11.0		539.4	
11.0		24,19, 20,19	
11.0		10.0	
11.0		537.4	
12		Red brown medium to fine SAND and SILT, some medium to fine gravel, trace little cobble, trace clay. -GLACIAL TILL	
15		Red brown coarse to fine SAND, some coarse to fine gravel, trace cobble, trace clay. -GLACIAL TILL	
15		End of boring at 10.	
Casing		Feet of	
Size From To		Earth Rock	
6.0 f 5.0 f		4	
No. of Samples		NOTES: Water introduced into borehole during rock coring operations.	
SAMPLE TYPE CODING: D=Driven C=Core A=Auger UP=Undisturbed Piston V=Vane Test		Hole No. B-28	
PROPORTIONS USED: Trace = 1 - 10%, Little = 10 - 20%, SOME = 20 - 35%, And = 35 - 50%		Sheet 1 Of 1	

DRILLER Trent Row		Hole No. B-29	
INSPECTOR IOO		Line Station 143+26 Offset 6' Rt.	
SOILS ENGINEER Earth Design Associates, .		PROJECT NAME: South Street Reconstruction Project PROJECT NUMBER: State Project No. 146-195 N. Coordinate 372465.2 E. Coordinate 681390.7	
TOWN: Vernon, CT		Client: Cardinal Engineering Associates, Inc.	
Boring Contractor: New England Boring Contractors of CT.		Client: Cardinal Engineering Associates, Inc.	
Surface Elevation (f): 547.37		Utilized	
Date Started: 10/23/15		Type	
Date Finished: 10/23/15		BW NW HW FJ Solid Hollow	
Groundwater Observations		Size I.D. (in) 2 1/2 3 4 4 3 (1/4) 3 1 3/8	
@ Dry 1 after 0 hours		Hammer (bls) 300 300 300 300	
@ 1 after 0 hours		Fall (in) 30 30 30 24	
Casing		Auger Mud Sampler Core Barrel	
D E P T H		SAMPLE	
Casing blows per foot		DEPTH IN FEET FROM - TO	
NO.		PEN. F. REC. F. Type	
Blows per 6 inches or RGD		STRATA CHANGE: DEPTH, ELEV.	
FIELD IDENTIFICATION OF SOIL REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)			
0		0.4 547.0 0.6 546.8	
0.5-2.5		1 2.0 1.5 SS 7,5,7,8	
3		Asphalt, 5". Base, 2". Red brown SILT and medium to fine SAND, little fine gravel.	
2.5-4.5		2 2.0 1.3 SS 9,10,9, 11	
6		6.0	
6.0-8.0		3 2.0 1.7 SS 14,12, 13,18	
9		8.0	
8.0-10.0		4 2.0 1.7 SS 24,19, 20,19	
12		Red brown medium to fine SAND and SILT, some medium to fine gravel, trace little cobble, trace clay. -GLACIAL TILL	
15		Red brown coarse to fine SAND, some coarse to fine gravel, trace cobble, trace clay. -GLACIAL TILL	
15		End of boring at 10.	
Casing		Feet of	
Size From To		Earth Rock	
10.0 f 0.0 f		4	
No. of Samples		NOTES:	
SAMPLE TYPE CODING: D=Driven C=Core A=Auger UP=Undisturbed Piston V=Vane Test		Hole No. B-29	
PROPORTIONS USED: Trace = 1 - 10%, Little = 10 - 20%, SOME = 20 - 35%, And = 35 - 50%		Sheet 1 Of 1	

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
			Plotted: APR. 29, 2016

DESIGNER/DRAFTER: AD
CHECKED BY: ME

CARDINAL
ENGINEERING ASSOCIATES

3 Colony Street | Meriden, CT 06451 | 203-238-1969

Filename: P:\Civ3d\Proj2014\VernonSouthSt64\Prod\g\bor01 to bor04.dwg

SIGNATURE/ BLOCK:
PROJECT TITLE:

**RECONSTRUCTION OF
SOUTH STREET**

TOWN: VERNON	PROJECT NO. 146-195
DRAWING TITLE: BORING LOGS	DRAWING NO. BOR 04
	SHEET NO. 03 06