ROUTE 25 & OAK HILL ROAD IMPROVEMENT PROJECTS

INTERSECTION RECONSTRUCTION, SIDEWALKS & ROAD CONSTRUCTION
ROUTE 25 & OAK HILL ROAD
STANDISH, MAINE

For

TOWN OF STANDISH

175 NORTHEAST ROAD
STANDISH, MAINE 04084

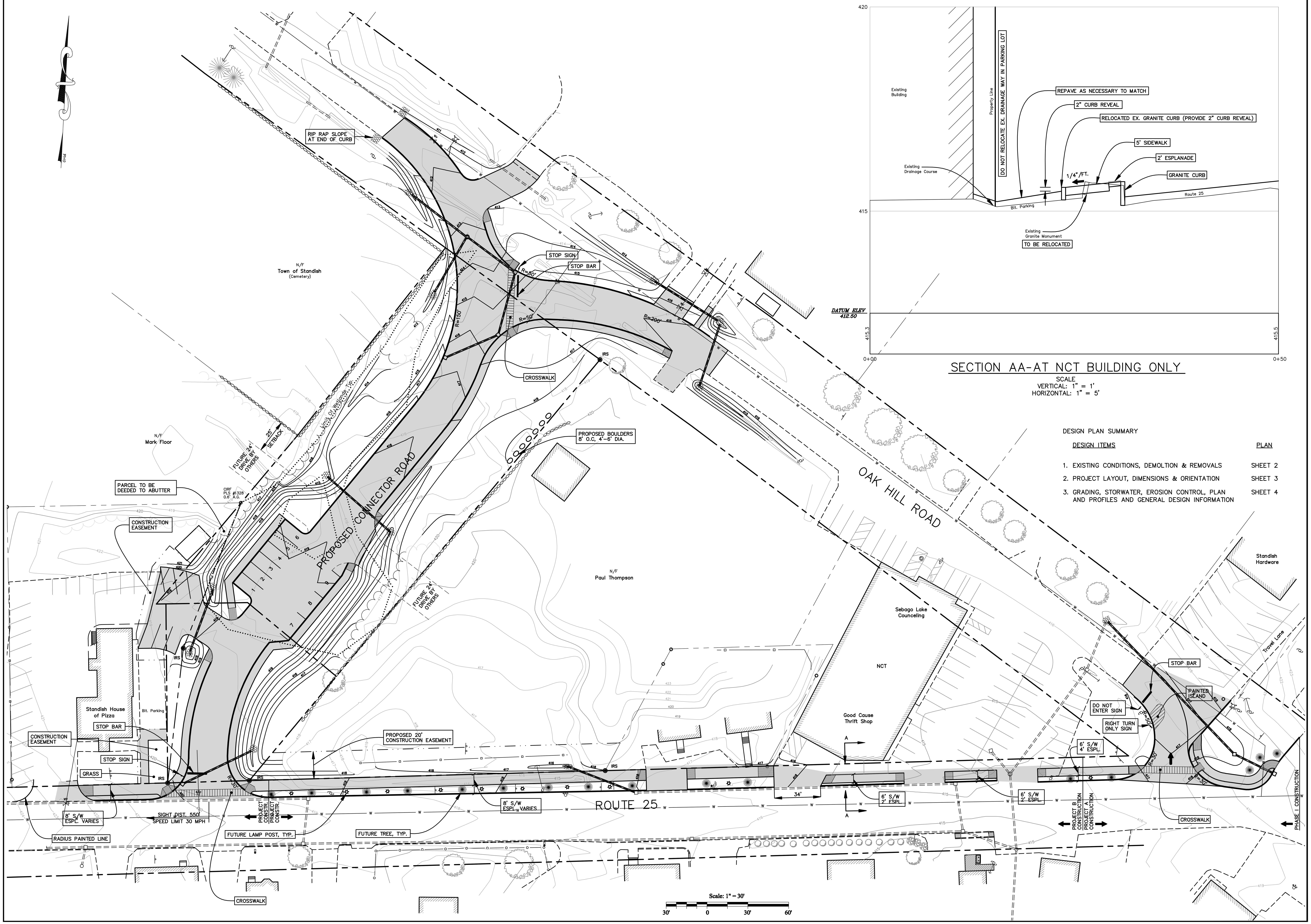
PROJECT A - CONNECTOR ROAD, ROUTE 25 & OAK HILL ROAD INTERSECTION IMPROVEMENTS
PROJECT B - ROUTE 25 SIDEWALK IMPROVEMENTS

MAY 2012

BH2M

Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors

28 State Street
Gorham, Maine 04038
Tel. (207) 839-2771
Fax (207) 839-8250



SECTION AA-AT NCT BUILDING ONLY

SCALE
VERTICAL: 1" = 1'
HORIZONTAL: 1" = 5'

DESIGN PLAN SUMMARY

DESIGN ITEMS	PLAN
1. EXISTING CONDITIONS, DEMOLTION & REMOVALS	SHEET 2
2. PROJECT LAYOUT, DIMENSIONS & ORIENTATION	SHEET 3
3. GRADING, STORWATER, EROSION CONTROL, PLAN AND PROFILES AND GENERAL DESIGN INFORMATION	SHEET 4

NO.	DATE	REVISION DESCRIPTION

BH2M
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Fax (207) 839-8250

FOR
The Town Of Standish
175 Northeast Road
Standish, Maine 04084

MASTER PLAN

ROUTE 25 & OAK HILL ROAD IMPROVEMENT PROJECTS

ROUTE 25 AND OAK HILL ROAD
STANDISH, MAINE

DESIGNED	DATE
W. Pelkey	Jan. 2012
DRAWN	SCALE
Dept.	As Noted
CHECKED	JOB. NO.
L. Berry	11107

SHEET
1

EXISTING CONDITIONS LEGEND

SYMBOL	DESCRIPTION
GMF	GRANITE MONUMENT FOUND
IPF/IRF	IRON PIPE/ROD FOUND
	EXISTING SIGN
	PROPERTY LINE
N/F	NOW OR FORMERLY
151	EXISTING CONTOUR
	STONE WALL
	UTILITY POLE
OHE	OVERHEAD UTILITIES
12"	STORM DRAIN
8" PVC	SANITARY SEWER
8" Watermain	WATER LINE
	DRAIN MANHOLE
	SANITARY SEWER MANHOLE
	HYDRANT
	BUILDING
	EDGE OF PAVEMENT/CURB
	PAVEMENT STRIPING
	CATCH BASIN
	WETLANDS

PLAN REFERENCES:

A. "OAK HILL ROAD RIGHT OF WAY SURVEY FOR TOWN OF STANDISH" BY BH2M DATED APRIL 1997 AND RECORDED IN REGISTRY OF DEEDS AS PLAN BOOK 198 PAGE 12.

B. "PLAN OF PROPERTY AT STANDISH CORNER, ROUTE 25 AND OAK HILL ROAD" BY GORRILL-PALMER CONSULTING ENGINEERS DATED FEBRUARY 28, 2011.

C. "STATE HIGHWAY "12" (ROUTE 25) RIGHT OF WAY MAP FOR PROJECT NO. STP-2847(12)X" BY MAINE DOT DATED JULY 2001 (DOT FILE NO. 3-474).

D. "BOUNDARY SURVEY OF 14 OSSIPEE TRAIL, STANDISH, MAINE" BY WAYNE WOOD & COMPANY DATED JUNE 2009 (JOB NO. 29023).

REMOVALS/DEMOLITION LEGEND

HATCH/SYMBOL	DESCRIPTION
	PAVEMENT/GRAVEL TO BE REMOVED BY CONTRACTOR
	SAWCUT PAVEMENT
	EXISTING BUILDING TO BE REMOVED BY TOWN OF STANDISH
	LIMIT OF TREE CLEARING BY CONTRACTOR
	TO BE DEMOLISHED/REMOVED/RELOCATED BY CONTRACTOR

EXISTING STORMDRAIN STRUCTURES

DMH 1 — RIM 415.20; INV. IN (12" PE)=409.56; INV. IN (12" PE)=409.56; INV. OUT (15" RCP)=409.56

CB 1 — RIM 429.40; INV. IN (6" UD)=424.10±; INV. OUT (12" PE)=424.10

CB 2 — RIM 418.61; INV. IN (12" PE)=413.96±; INV. OUT (15" RCP)=413.96

CB 3 — RIM 418.69; INV. IN (15" RCP)=413.84±; INV. IN (24" PE)=413.84±; INV. OUT (24" PE)=413.84±

CB 4 — RIM 421.84; INV. IN (12" PE)=416.59; INV. IN (24" PE)=416.59; INV. OUT (24" PE)=416.52

CB 5 — RIM 419.91; INV. OUT (15" PE)=416.91±

CB 6 — RIM 416.42; INV. IN (15" PE)=411.61; INV. OUT (18" PE)=411.54

CB 7 — RIM 415.93; INV. IN (24" PE)=410.69; INV. OUT (24" PE)=410.59

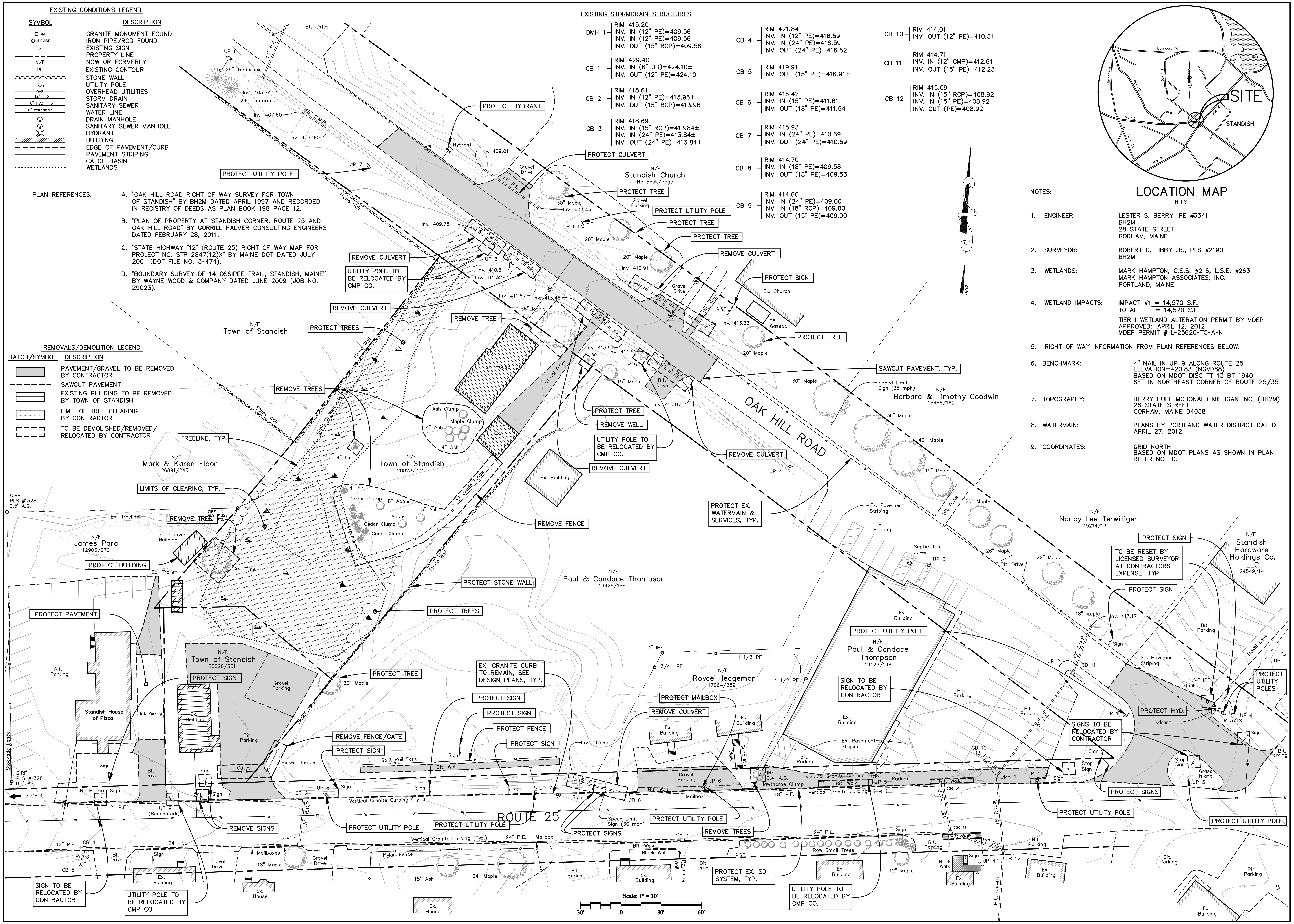
CB 8 — RIM 414.70; INV. IN (18" PE)=409.58; INV. OUT (18" PE)=409.53

CB 9 — RIM 414.60; INV. IN (24" PE)=409.00; INV. IN (18" RCP)=409.00; INV. OUT (15" PE)=409.00

CB 10 — RIM 414.01; INV. OUT (12" PE)=410.31

CB 11 — RIM 414.71; INV. IN (12" CMP)=412.61; INV. OUT (15" PE)=412.23

CB 12 — RIM 415.09; INV. IN (15" RCP)=408.92; INV. IN (15" PE)=408.92; INV. OUT (PE)=408.92



LOCATION MAP

N.T.S.

NOTES:

1. ENGINEER: LESTER S. BERRY, PE #3341, BH2M, 28 STATE STREET, GORHAM, MAINE

2. SURVEYOR: ROBERT C. LIBBY JR., PLS #2190, BH2M

3. WETLANDS: MARK HAMPTON, C.S.S. #216, L.S.E. #263, MARK HAMPTON ASSOCIATES, INC., PORTLAND, MAINE

4. WETLAND IMPACTS: IMPACT #1 = 14,570 S.F.; TOTAL = 14,570 S.F.; TIER I WETLAND ALTERATION PERMIT BY MDEP APPROVED: APRIL 12, 2012; MDEP PERMIT # L-25620-TC-A-N

5. RIGHT OF WAY INFORMATION FROM PLAN REFERENCES BELOW.

6. BENCHMARK: 4" NAIL IN UP 9 ALONG ROUTE 25; ELEVATION=420.83 (NGVD88); BASED ON MDOT DISC TT 13 BT 1940; SET IN NORTHEAST CORNER OF ROUTE 25/35

7. TOPOGRAPHY: BERRY HUFF MCDONALD MILLIGAN INC, (BH2M), 28 STATE STREET, GORHAM, MAINE 04038

8. WATERMAIN: PLANS BY PORTLAND WATER DISTRICT DATED APRIL 27, 2012

9. COORDINATES: GRID NORTH; BASED ON MDOT PLANS AS SHOWN IN PLAN REFERENCE C.

REVISION		
NO.	DATE	DESCRIPTION

BH2M
Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors
28 State Street, Gorham, Maine 04038
Tel. (207) 839-2771
Fax (207) 839-8250

FOR The Town Of Standish, 175 Northeast Road, Standish, Maine 04084

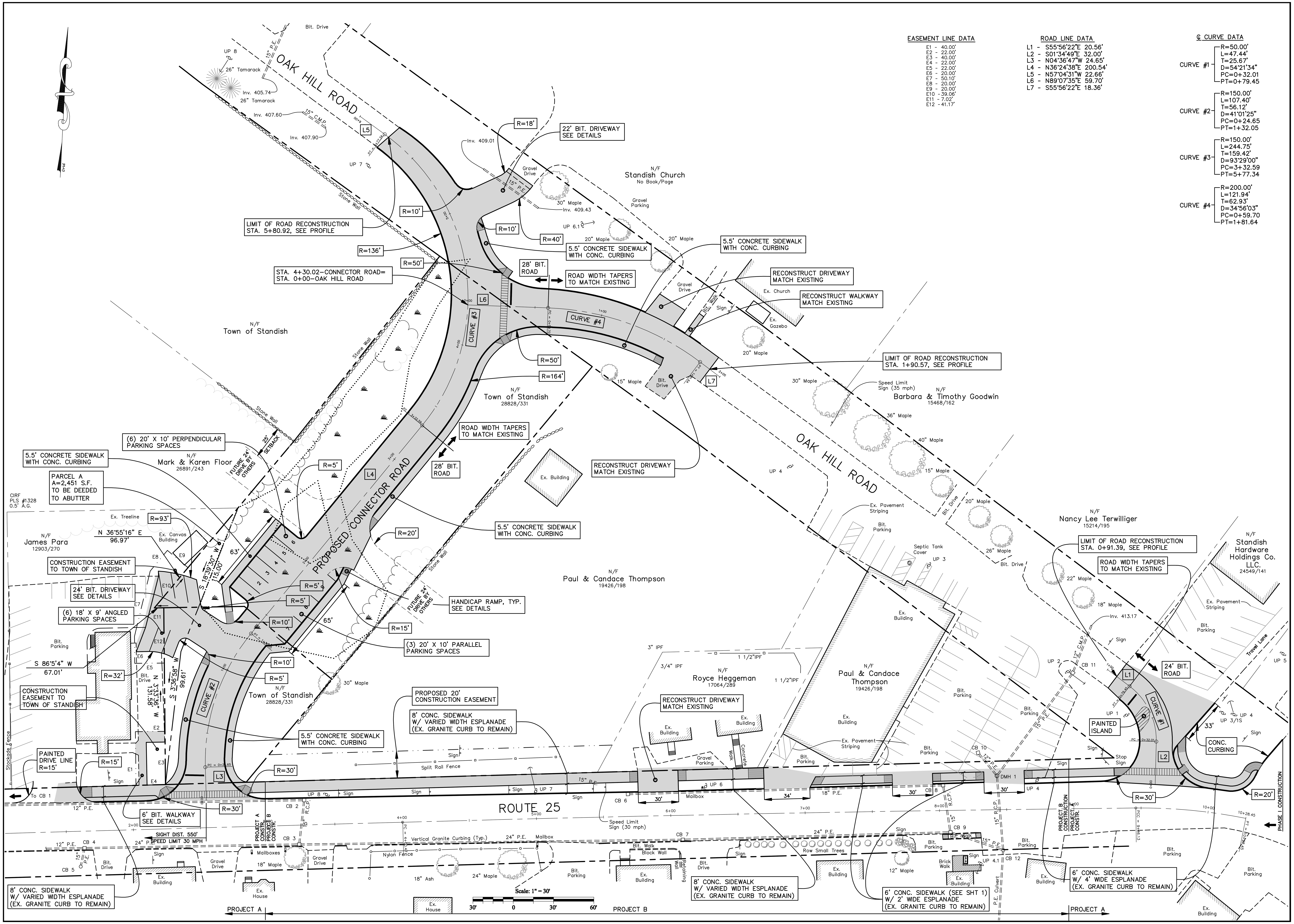
EXISTING CONDITIONS, REMOVALS AND DEMOLITION PLAN

ROUTE 25 & OAK HILL ROAD IMPROVEMENT PROJECTS

ROUTE 25 AND OAK HILL ROAD, STANDISH, MAINE

DESIGNED	DATE
W. Pelkey	Jan. 2012
DRAWN	SCALE
Dept.	As Noted
CHECKED	JOB. NO.
L. Berry	11107

SHEET 2



EASEMENT LINE DATA

E1 - 40.00'
E2 - 22.00'
E3 - 40.00'
E4 - 22.00'
E5 - 22.00'
E6 - 20.00'
E7 - 50.10'
E8 - 20.00'
E9 - 20.00'
E10 - 39.06'
E11 - 7.02'
E12 - 41.17'

ROAD LINE DATA

L1 - S55°56'22"E 20.56'
L2 - S01°34'49"E 32.00'
L3 - N04°36'47"W 24.65'
L4 - N36°24'38"E 200.54'
L5 - N57°04'31"W 22.66'
L6 - N89°07'35"E 59.70'
L7 - S55°56'22"E 18.36'

℄ CURVE DATA

Curve	R	L	T	D	PC	PT
CURVE #1	R=50.00'	L=47.44'	T=25.67'	D=54°21'34"	PC=0+32.01	PT=0+79.45
CURVE #2	R=150.00'	L=107.40'	T=56.12'	D=41°01'25"	PC=0+24.65	PT=1+32.05
CURVE #3	R=150.00'	L=244.75'	T=159.42'	D=93°29'00"	PC=3+32.59	PT=5+77.34
CURVE #4	R=200.00'	L=121.94'	T=62.93'	D=34°56'03"	PC=0+59.70	PT=1+81.64

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FOR
The Town Of Standish
175 Northeast Road
Standish, Maine 04084

LAYOUT PLAN

ROUTE 25 & OAK HILL ROAD IMPROVEMENT PROJECTS

ROUTE 25 AND OAK HILL ROAD
STANDISH, MAINE

DESIGNED	DATE
W. Pelkey	Jan. 2012
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Dept.	As Noted
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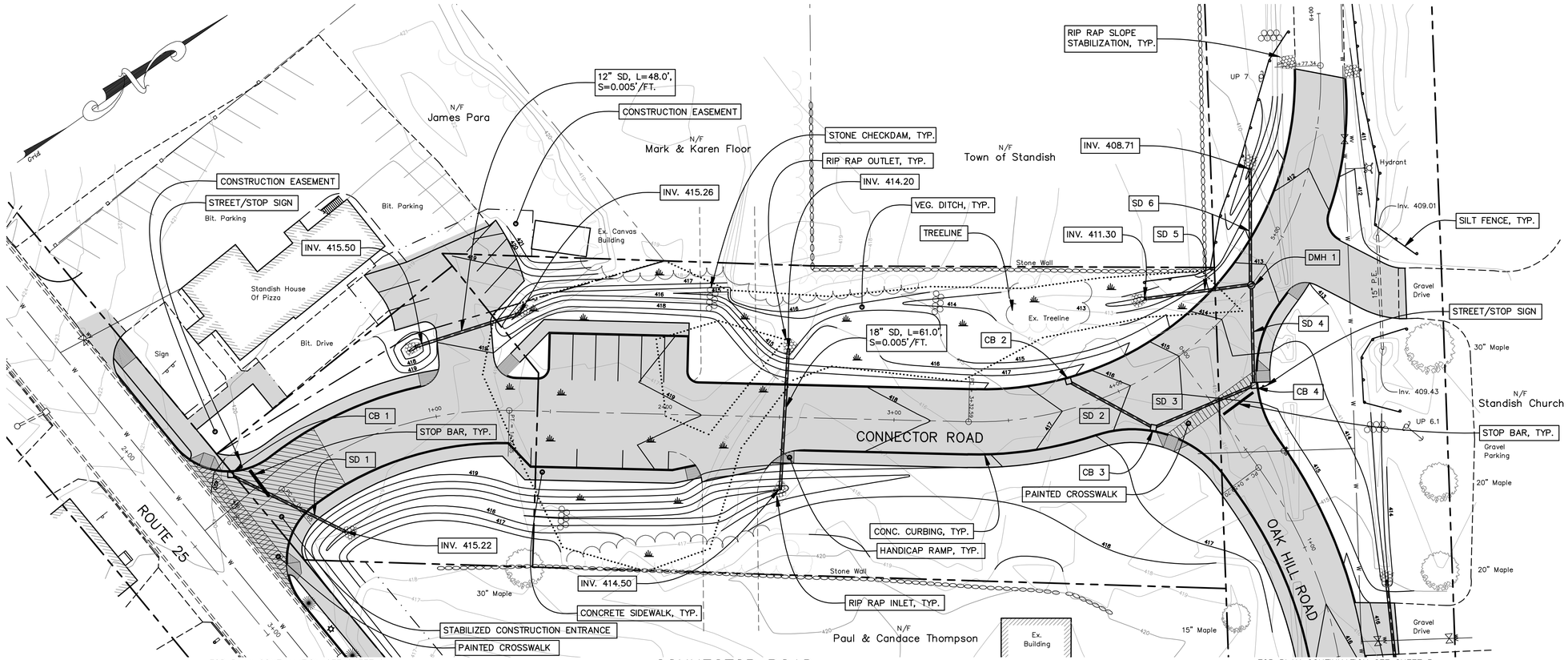
L. Berry	11107

SHEET
3



CONNECTOR ROAD

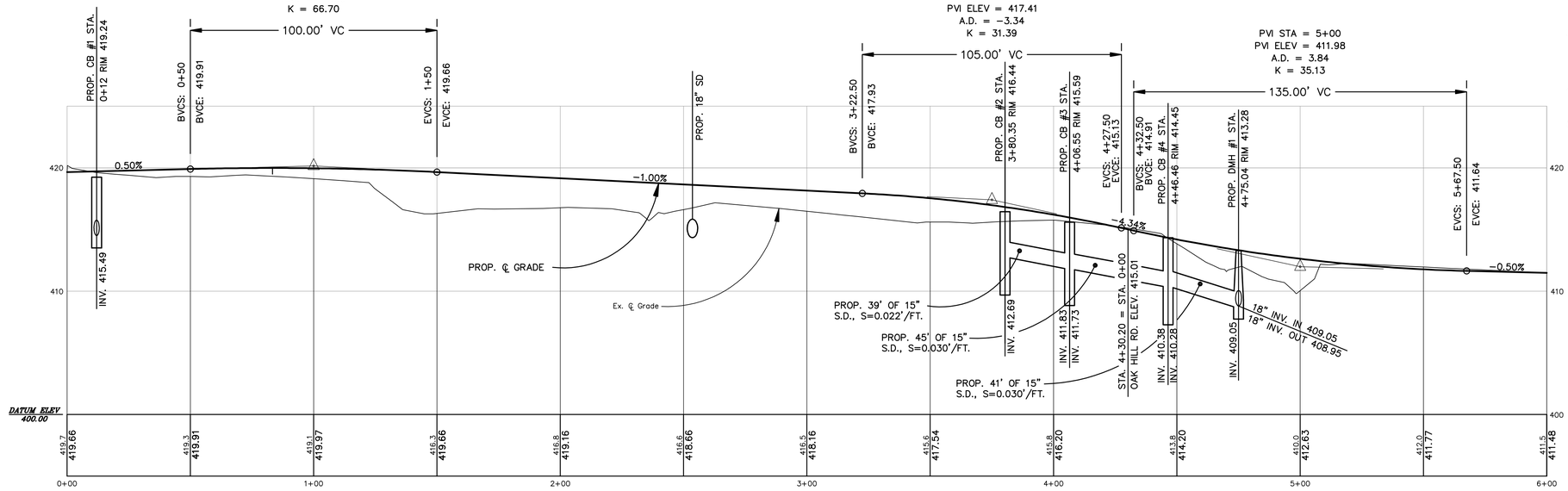
Scale: 1" = 25'

25' 0 25' 50'

HIGH POINT ELEV = 419.99
HIGH POINT STA = 0+83.35
PVI STA = 1+00
PVI ELEV = 420.16
A.D. = −1.50
K = 66.70

PVI STA = 3+75
PVI ELEV = 417.41
A.D. = −3.34
K = 31.39

PVI STA = 5+00
PVI ELEV = 411.98
A.D. = 3.84
K = 35.13



PROFILE

SCALE
VERTICAL: 1" = 5'
HORIZONTAL: 1" = 25'

STORMDRAIN PIPES

SD1 - 15" S.D., L=55', S=0.005'/FT.
SD2 - 15" S.D., L=39', S=0.022'/FT.
SD3 - 15" S.D., L=45', S=0.030'/FT.
SD4 - 15" S.D., L=41', S=0.030'/FT.
SD5 - 18" S.D., L=45', S=0.050'/FT.
SD6 - 18" S.D., L=49', S=0.005'/FT.

STORMDRAIN STRUCTURES

CB#1 — RIM 419.24; 15" INV. OUT 415.49
CB#2 — RIM 416.44; 15" INV. OUT 412.69
CB#3 — RIM 415.59; 15" INV. IN 411.83; 15" INV. OUT 411.73
CB#4 — RIM 414.45; 15" INV. IN 410.38; 15" INV. OUT 410.28
DMH#1 — RIM 413.28; 15" INV. IN 409.05; 18" INV. IN 409.05; 18" INV. OUT 408.95

NOTES:

1. INSTALL LOWPOINT SEDIMENT CONTROL BARRIERS AT ALL CATCH BASIN LOCATIONS, SEE DETAIL.
2. CONDUITS FOR POWER AND COMMUNICATION CABLES SHALL BE SPECIFIED BY APPROPRIATE UTILITY COMPANIES.
3. MINIMUM 1' VERTICAL CLEARANCE BETWEEN WATER SERVICE CROSSINGS AND SEWER MAIN/SERVICES. MINIMUM 6" CLEARANCE FROM STORM DRAIN CROSSINGS.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE PRIOR TO CONSTRUCTION, SEE DETAIL.
5. BENCHMARK: 4" NAIL IN UP 9 ALONG ROUTE 25
   ELEVATION=420.83 (NGVD88)
   BASED ON MDOT DISC TT 13 BT 1940
   SET IN NORTHEAST CORNER OF ROUTE 25/35

LEGEND

- WATER SERVICE
- SANITARY SEWER
- UNDERGROUND ELECTRIC
- STORM DRAIN
- PRESSURE SEWER
- SILT FENCE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- TRANFORMER PAD
- UTILITY POLE
- SANITARY SEWER MANHOLE
- CATCH BASIN
- DRAIN MANHOLE
- STREET LIGHT

NO.	DATE	REVISION DESCRIPTION

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FOR
The Town Of Standish
175 Northeast Road
Standish, Maine 04084

CONNECTOR ROAD
PLAN & PROFILE
PROJECT A
ROUTE 25 & OAK HILL ROAD
IMPROVEMENT PROJECTS
ROUTE 25 AND OAK HILL ROAD
STANDISH, MAINE

DESIGNED	DATE
W. Pelkey	Jan. 2012
DRAWN	SCALE
Dept.	As Noted
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L. Berry	11107

SHEET
4

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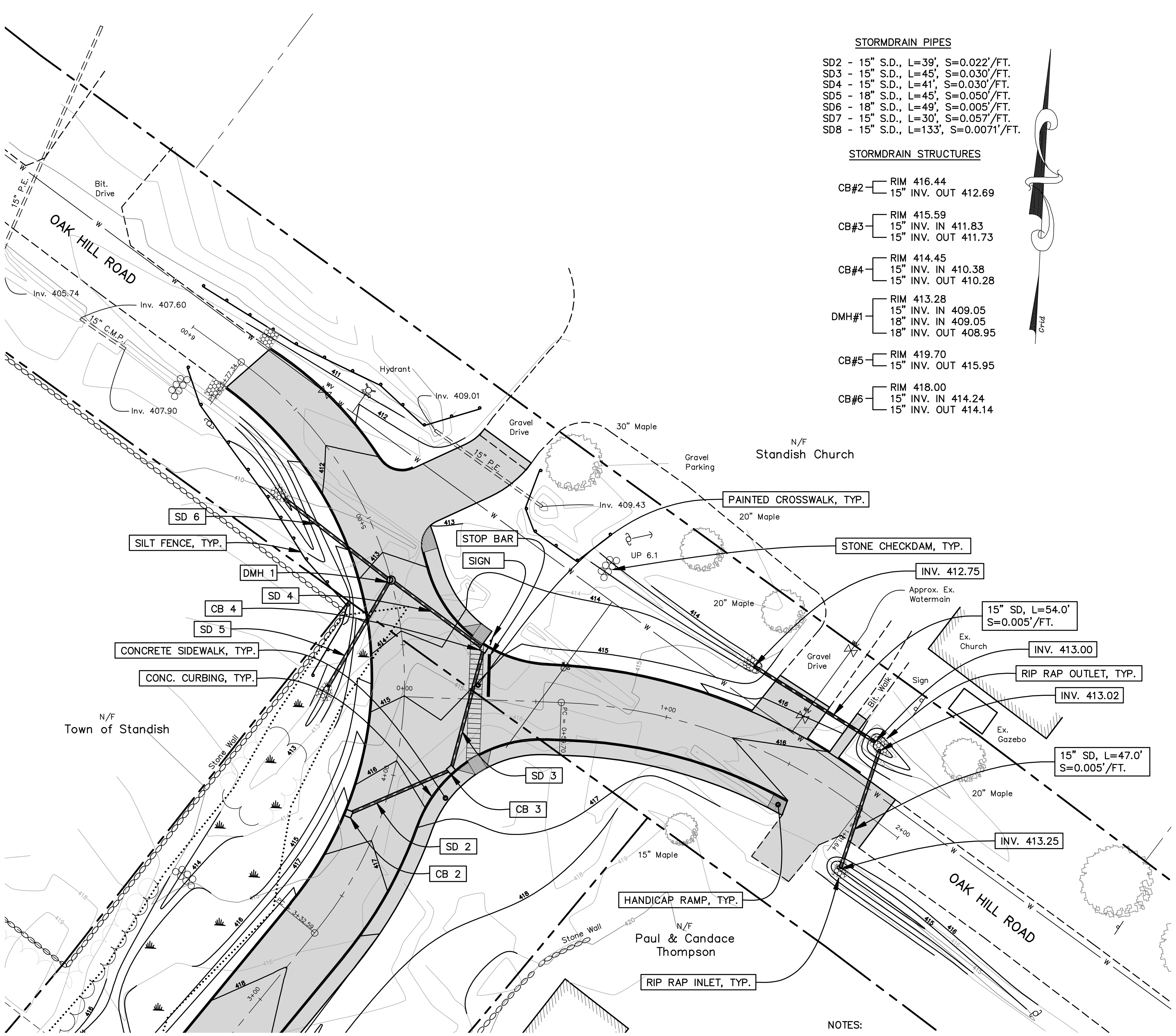


FOR PLAN CONTINUATION SEE SHEET 6

OAK HILL ROAD-WEST

Scale: 1" = 25'

STORMDRAIN PIPES

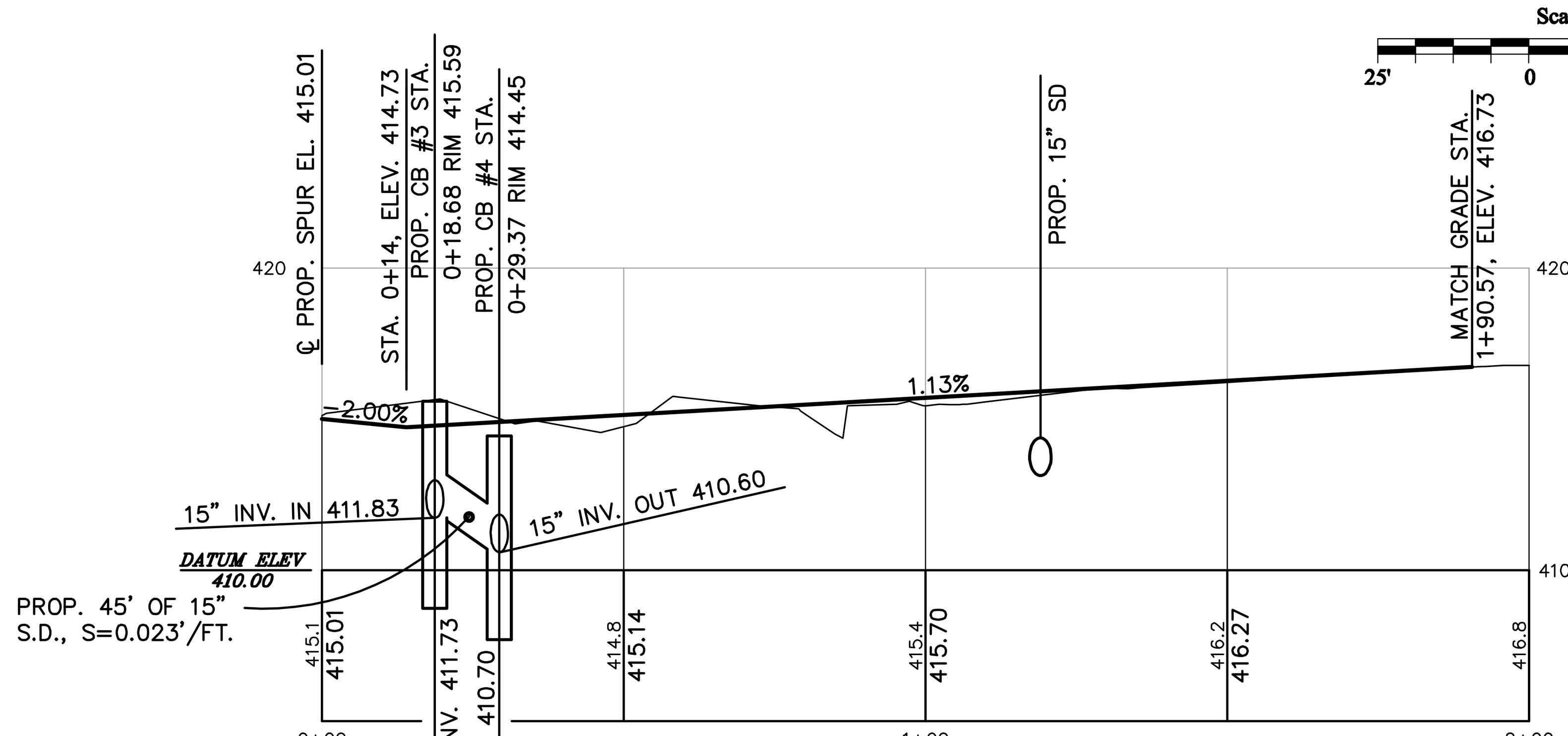
SD2 - 15" S.D., L=39', S=0.022'/FT.
SD3 - 15" S.D., L=45', S=0.030'/FT.
SD4 - 15" S.D., L=41', S=0.030'/FT.
SD5 - 18" S.D., L=45', S=0.050'/FT.
SD6 - 18" S.D., L=49', S=0.005'/FT.
SD7 - 15" S.D., L=30', S=0.057'/FT.
SD8 - 15" S.D., L=133', S=0.0071'/FT.

STORMDRAIN STRUCTURES

Structure	Data
CB#2	RIM 416.44; 15" INV. OUT 412.69
CB#3	RIM 415.59; 15" INV. IN 411.83; 15" INV. OUT 411.73
CB#4	RIM 414.45; 15" INV. IN 410.38; 15" INV. OUT 410.28
DMH#1	RIM 413.28; 15" INV. IN 409.05; 18" INV. IN 409.05; 18" INV. OUT 408.95
CB#5	RIM 419.70; 15" INV. OUT 415.95
CB#6	RIM 418.00; 15" INV. IN 414.24; 15" INV. OUT 414.14

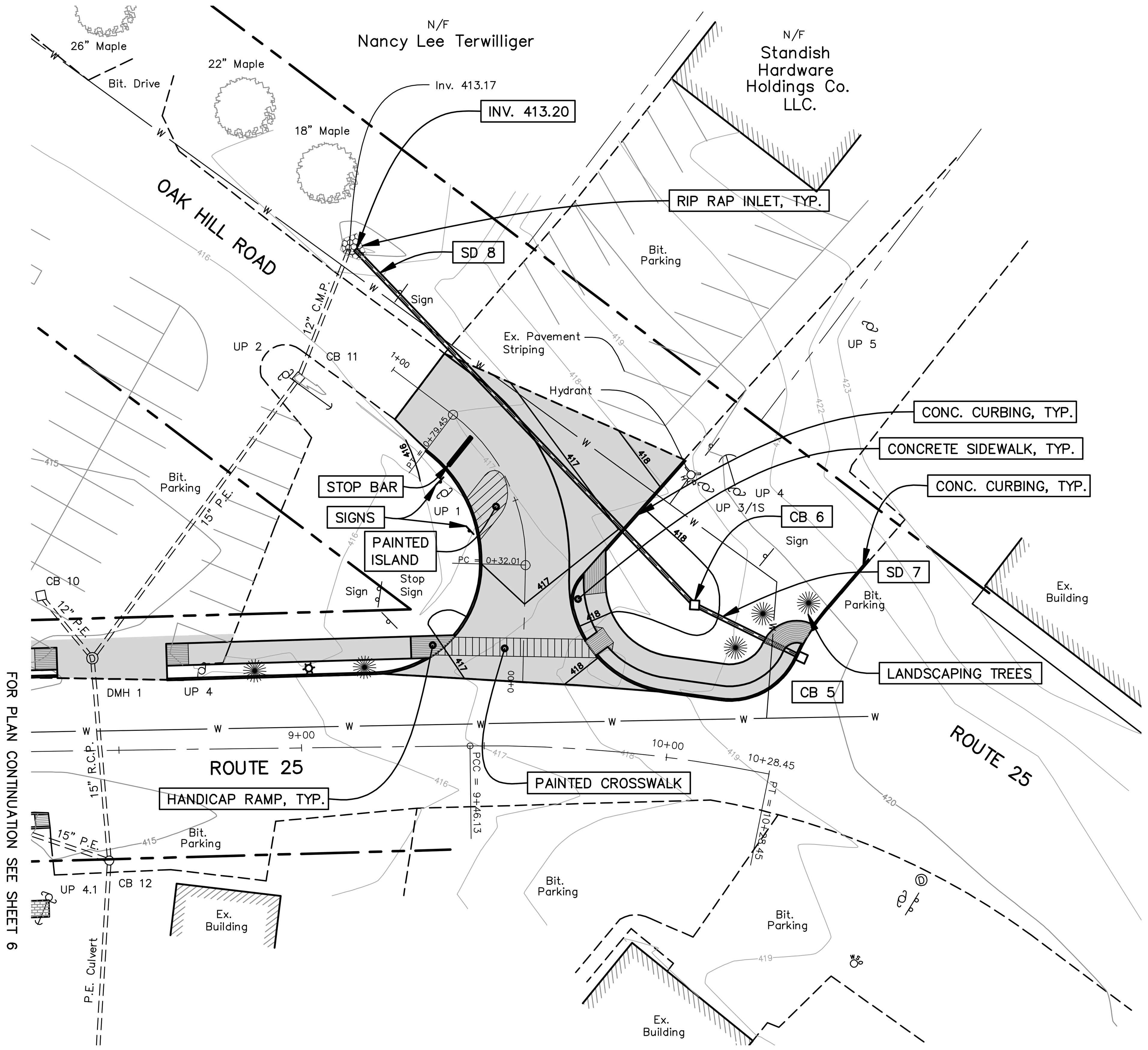
NOTES:

1. INSTALL LOWPOINT SEDIMENT CONTROL BARRIERS AT ALL CATCH BASIN LOCATIONS, SEE DETAIL.
2. CONDUITS FOR POWER AND COMMUNICATION CABLES SHALL BE SPECIFIED BY APPROPRIATE UTILITY COMPANIES.
3. MINIMUM 1' VERTICAL CLEARANCE BETWEEN WATER SERVICE CROSSINGS AND SEWER MAIN/SERVICES. MINIMUM 6" CLEARANCE FROM STORM DRAIN CROSSINGS.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE PRIOR TO CONSTRUCTION, SEE DETAIL.
5. BENCHMARK: 4" NAIL IN UP 9 ALONG ROUTE 25 ELEVATION=420.83 (NGVD88) BASED ON MDOT DISC TT 13 BT 1940 SET IN NORTHEAST CORNER OF ROUTE 25/35



PROFILE

SCALE
VERTICAL: 1" = 5'
HORIZONTAL: 1" = 25'



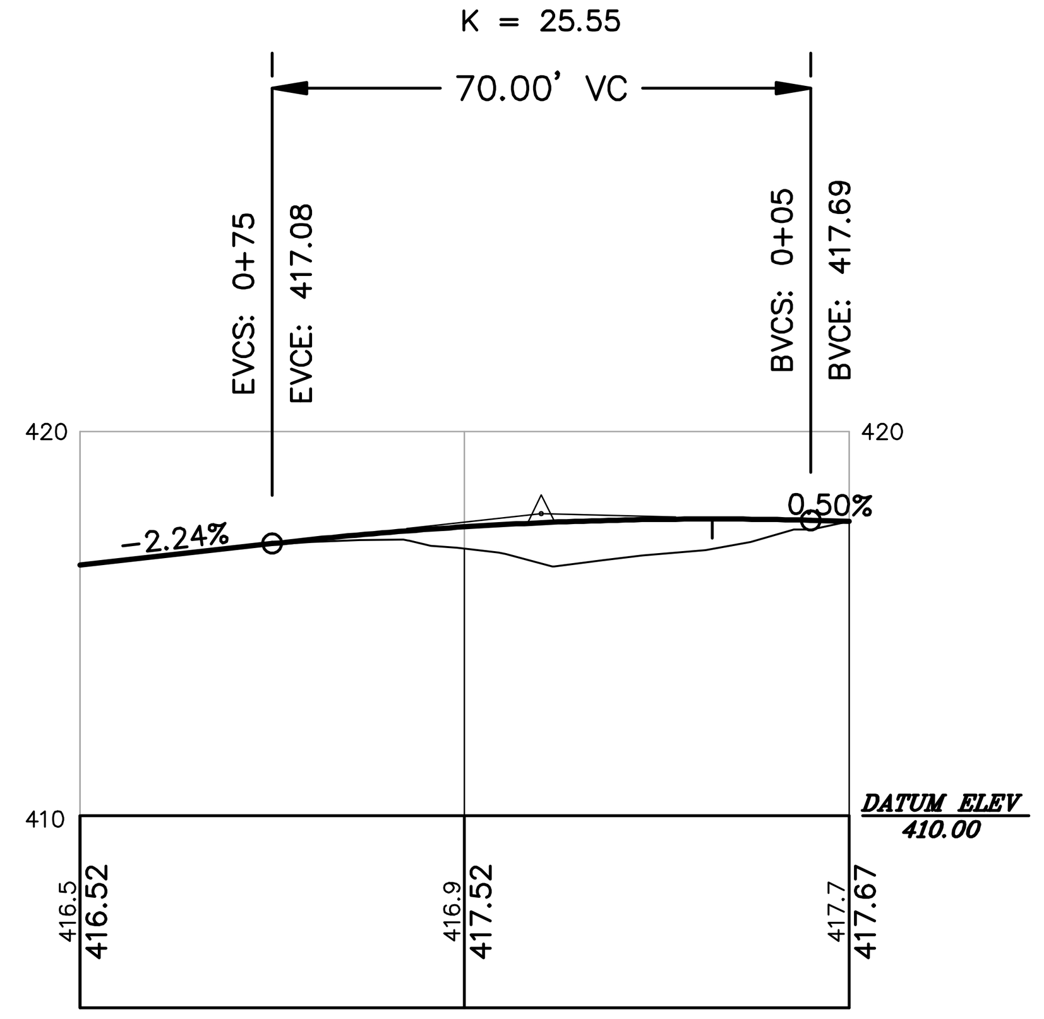
INTERSECTION RECONSTRUCTION

Scale: 1" = 25'

EXISTING STORMDRAIN STRUCTURES

Structure	Data
DMH 1	RIM 415.20; INV. IN (12" PE)=409.56; INV. IN (12" PE)=409.56; INV. OUT (15" RCP)=409.56
CB 1	RIM 429.40; INV. IN (6" UD)=424.10±; INV. OUT (12" PE)=424.10
CB 11	RIM 414.71; INV. IN (12" CMP)=412.61; INV. OUT (15" PE)=412.23
CB 12	RIM 415.09; INV. IN (15" RCP)=408.92; INV. IN (15" PE)=408.92; INV. OUT (PE)=408.92

HIGH POINT ELEV = 417.72
HIGH POINT STA = 0+17.78
PVI STA = 0+40
PVI ELEV = 417.87
A.D. = -2.74
K = 25.55



PROFILE

SCALE
VERTICAL: 1" = 5'
HORIZONTAL: 1" = 25'

LEGEND

- WATER SERVICE
- SANITARY SEWER
- UNDERGROUND ELECTRIC
- STORM DRAIN
- PRESSURE SEWER
- SILT FENCE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- TRANFORMER PAD
- UTILITY POLE
- SANITARY SEWER MANHOLE
- CATCH BASIN
- DRAIN MANHOLE
- STREET LIGHT

REVISION

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FOR
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175 Northeast Road
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OAK HILL ROAD PLAN & PROFILES & INTERSECTION RECONSTRUCTION PROJECT A

ROUTE 25 & OAK HILL ROAD IMPROVEMENT PROJECTS

ROUTE 25 AND OAK HILL ROAD
STANDISH, MAINE

DESIGNED	DATE
W. Pelkey	Jan. 2012
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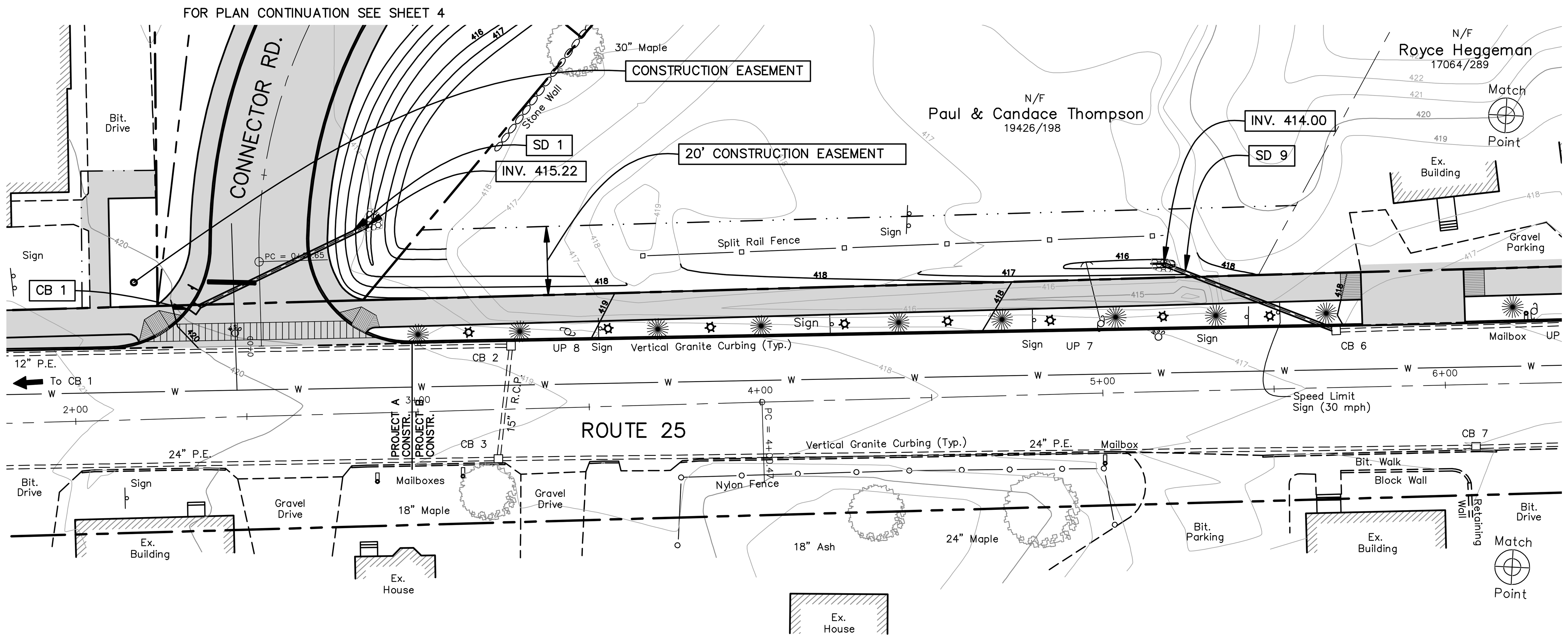
L. Berry	11107

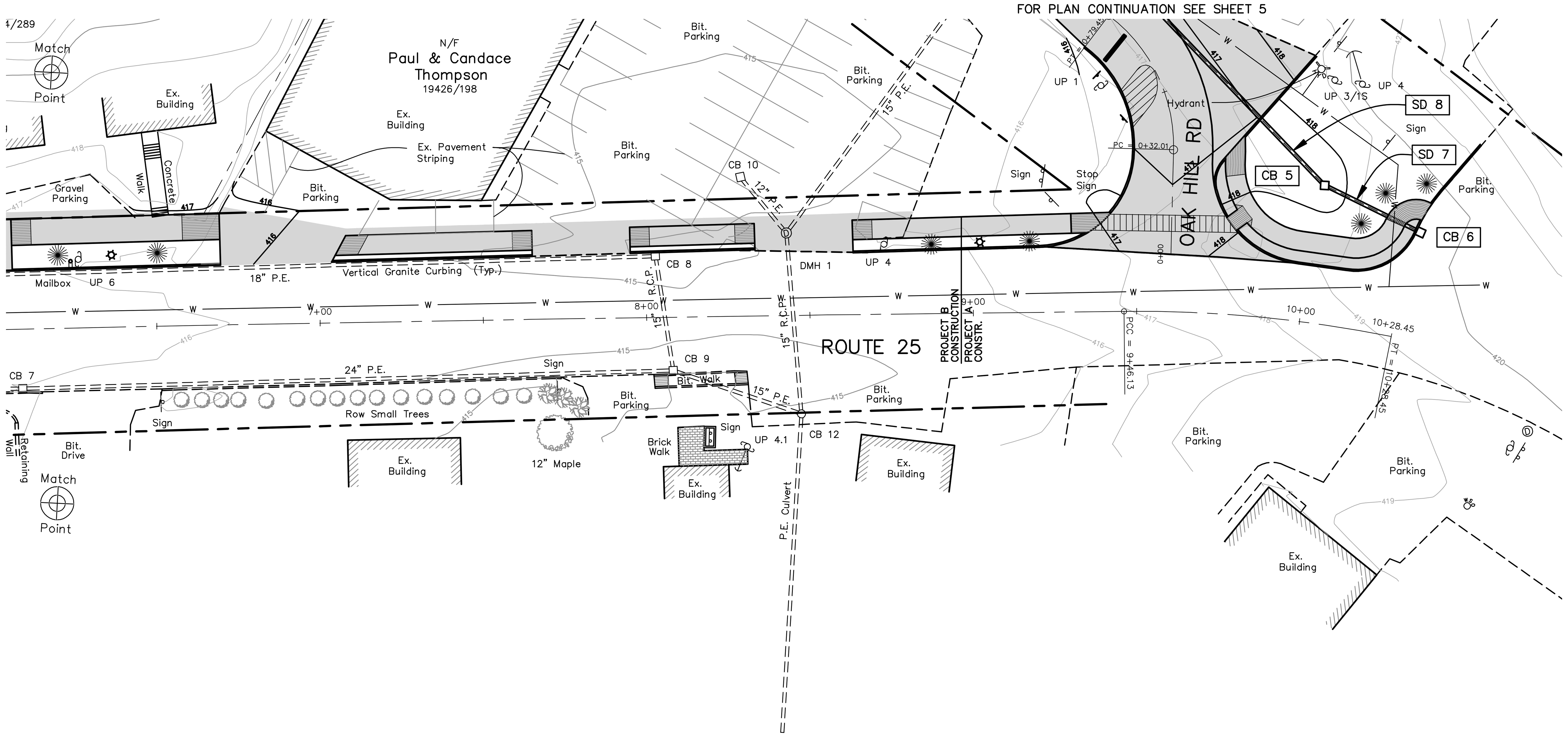
SHEET
5



ROUTE 25

Scale: 1" = 25'

25' 0 25' 50'



ROUTE 25

Scale: 1" = 25'

25' 0 25' 50'

NOTES:

1. INSTALL LOWPOINT SEDIMENT CONTROL BARRIERS AT ALL CATCH BASIN LOCATIONS, SEE DETAIL.
2. CONDUITS FOR POWER AND COMMUNICATION CABLES SHALL BE SPECIFIED BY APPROPRIATE UTILITY COMPANIES.
3. MINIMUM 1' VERTICAL CLEARANCE BETWEEN WATER SERVICE CROSSINGS AND SEWER MAIN/SERVICES. MINIMUM 6" CLEARANCE FROM STORM DRAIN CROSSINGS.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE PRIOR TO CONSTRUCTION, SEE DETAIL.
5. BENCHMARK: 4" NAIL IN UP 9 ALONG ROUTE 25
   ELEVATION=420.83 (NGVD88)
   BASED ON MDOT DISC TT 13 BT 1940
   SET IN NORTHEAST CORNER OF ROUTE 25/35

EXISTING STORMDRAIN STRUCTURES

DMH 1 — RIM 415.20
INV. IN (12" PE)=409.56
INV. IN (12" PE)=409.56
INV. OUT (15" RCP)=409.56

CB 1 — RIM 429.40
INV. IN (6" UD)=424.10±
INV. OUT (12" PE)=424.10

CB 2 — RIM 418.61
INV. IN (12" PE)=413.96±
INV. OUT (15" RCP)=413.96

CB 3 — RIM 418.69
INV. IN (15" RCP)=413.84±
INV. IN (24" PE)=413.84±
INV. OUT (24" PE)=413.84±

CB 4 — RIM 421.84
INV. IN (12" PE)=416.59
INV. IN (24" PE)=416.59
INV. OUT (24" PE)=416.52

CB 5 — RIM 419.91
INV. OUT (15" PE)=416.91±

CB 6 — RIM 416.42
18" INV. IN 411.61
INV. OUT (18" PE)=411.54

CB 7 — RIM 415.93
INV. IN (24" PE)=410.69
INV. OUT (24" PE)=410.59

CB 8 — RIM 414.70
INV. IN (18" PE)=409.58
INV. OUT (18" PE)=409.53

CB 9 — RIM 414.60
INV. IN (24" PE)=409.00
INV. IN (18" RCP)=409.00
INV. OUT (15" PE)=409.00

CB 10 — RIM 414.01
INV. OUT (12" PE)=410.31

STORMDRAIN PIPES

SD1 - 15" S.D., L=55', S=0.005'/FT.
SD7 - 15" S.D., L=30', S=0.057'/FT.
SD8 - 15" S.D., L=133', S=0.0071'/FT.
SD9 - 18" S.D., L=53', S=0.045'/FT.

STORMDRAIN STRUCTURES

CB#1 — RIM 419.24
15" INV. OUT 415.49

CB#5 — RIM 419.70
15" INV. OUT 415.95

CB#6 — RIM 418.00
15" INV. IN 414.24
15" INV. OUT 414.14

LEGEND

- W — WATER SERVICE
- S — SANITARY SEWER
- E — UNDERGROUND ELECTRIC
- STORM DRAIN
- PS — PRESSURE SEWER
- SILT FENCE
- 160 EXISTING CONTOUR
- 160 PROPOSED CONTOUR
- T TRANFORMER PAD
- UTILITY POLE
- SANITARY SEWER MANHOLE
- CB CATCH BASIN
- DRAIN MANHOLE
- STREET LIGHT

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FOR
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ROUTE 25 PLAN
PROJECT B
ROUTE 25 & OAK HILL ROAD IMPROVEMENT PROJECTS

ROUTE 25 AND OAK HILL ROAD
STANDISH, MAINE

DESIGNED	DATE
W. Pelkey	Jan. 2012
DRAWN	SCALE
Dept.	As Noted
CHECKED	JOB. NO.
L. Berry	11107

SHEET
6

EROSION AND SEDIMENT CONTROL PLAN

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION IN DEVELOPING AREAS AS CONTAINED IN THE "MAINE EROSION AND SEDIMENT CONTROL BMP'S", DEPARTMENT OF ENVIRONMENTAL PROTECTION DATED MARCH 2003. FOR ADDITIONAL DETAILS AND SPECIFICATIONS SEE BMP'S MANUAL.

THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL STRUCTURES ARE SHOWN ON THE SITE PLAN.

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL BMP'S", DEPARTMENT OF ENVIRONMENTAL PROTECTION, DATED MARCH 2003.
2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 7 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 100 FEET OF A STREAM OR POND, THE AREA SHALL BE STABILIZED WITHIN 2 DAYS OR PRIOR TO ANY STORM EVENT (THIS WOULD INCLUDE WETLANDS).
3. SEDIMENT BARRIERS (EROSION CONTROL MIX, STONE CHECK DAMS, STABILIZED CONSTRUCTION ENTRANCE, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.
4. INSTALL EROSION CONTROL MIX AT TOE OF SLOPES TO FILTER SILT FROM RUNOFF. SEE E.C. MIX DETAIL FOR PROPER INSTALLATION. EROSION CONTROL MIX WILL REMAIN IN PLACE PER NOTE #5
5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY BEFORE AND FOLLOWING ANY SIGNIFICANT RAINFALL (0.5 INCHES) OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSURE. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY TURF. EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS OF PERMANENT STABILIZATION. PERMANENT STABILIZATION IS 90% GRASS CATCH IN VEGETATED AREAS.
6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO TO ONE (2 TO 1).
7. IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCHING (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
8. TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED BY AUG. 15 OR 45 DAYS PRIOR TO THE FIRST KILLING FROST (OCT. 1) TO PROTECT FROM SPRING RUNOFF PROBLEMS.
9. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER.
10. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:
    a. FOUR INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
    b. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 POUNDS PER ACRE OR 18.4 POUNDS PER 1,000 SQUARE FEET USING 10–20–20 (N–P205–K20) OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER 1,000 SQ. FT.).
    c. FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDED TO A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEEDED TO A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUEGRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYEGRASS: SEEDING RATE IS 1.03 LBS PER 1000 SQ. FT. LAWN QUALITY SOD MAY BE SUBSTITUTED FOR SEED. SEED MIX SHALL CONTAIN 10% ANNUAL RYE GRASS.
    d. HAY MULCH AT THE RATE OF 70–90 LBS PER 1000 SQUARE FEET OR A HYDRO–APPLICATION OF ASPHALT, WOOD OR PAPER FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS WILL BE USED ON HAY MULCH FOR WIND CONTROL.
11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS ONCE THE SITE IS STABILIZED WITH 90% GRASS CATCH IN VEGETATED AREAS. TEMPORARY EROSION AND SEDIMENT CONTROL BLANKET SHALL BE USED IN ALL DITCHES AND SWALES AS SHOWN IN DETAILS.
12. WETLANDS WILL BE PROTECTED WITH EROSION CONTROL MIX OR SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.

MULCH AND MULCH ANCHORING

MULCH

LOCATION	MULCH	RATE (1000 S.F.)
PROTECTED AREA	STRAW OR HAY *	100 POUNDS
WINDY AREAS	SHREDDED OR CHOPPED CORNSTALKS	185–275 POUNDS
	STRAW OR HAY (ANCHORED) *	100 POUNDS
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES (GREATER THAN OR EQUAL TO 3:1)	JUTE MESH OR EXCELSIOR MAT	AS REQUIRED AS REQUIRED

(GREATER THAN OR EQUAL TO 3:1)

* A HYDRO–APPLICATION OF ASPHALT, WOOD, OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS SHALL BE USED ON HAY MULCH FOR WIND CONTROL.

MULCH ANCHORING

ANCHOR MULCH WITH PEG AND TWINE (1 SQ. YD./BLOCK); MULCH NETTING (AS PER MANUFACTURED; ASPHALT EMULSION (0.04 GALLONS PER SQ YD.); LIQUID ASPHALT (0.10 GALLONS PER SQ. YD.); WOOD CELLULOSE FIBER (750 LBS/ACRE); CHEMICAL TACK (AS PER MANUFACTURERS SPECIFICATIONS); USE OF A SERRATED STRAIGHT DISK. WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.

Additional temporary seed mixture (for periods less than 12 months).

Season	Seed	Rate
Summer (5/15 – 8/15)	Sudangrass	40 lbs/acre
	Oats	80 lbs/acre
Late Summer/Early Fall (8/15 – 9/15)	Prennial Ryegrass	40 lbs/acre
Fall (9/15 – 11/1)	Winter Rye	112 lbs/acre
Winter (11/1 – 4/1)	Mulch w/ Dormant Seed	80 lbs/acre*
Spring (4/1 – 7/1)	Oats	80 lbs/acre
	Annual Ryegrass	40 lbs/acre

*Seed Rate Only

EROSION CONTROL DURING CONSTRUCTION

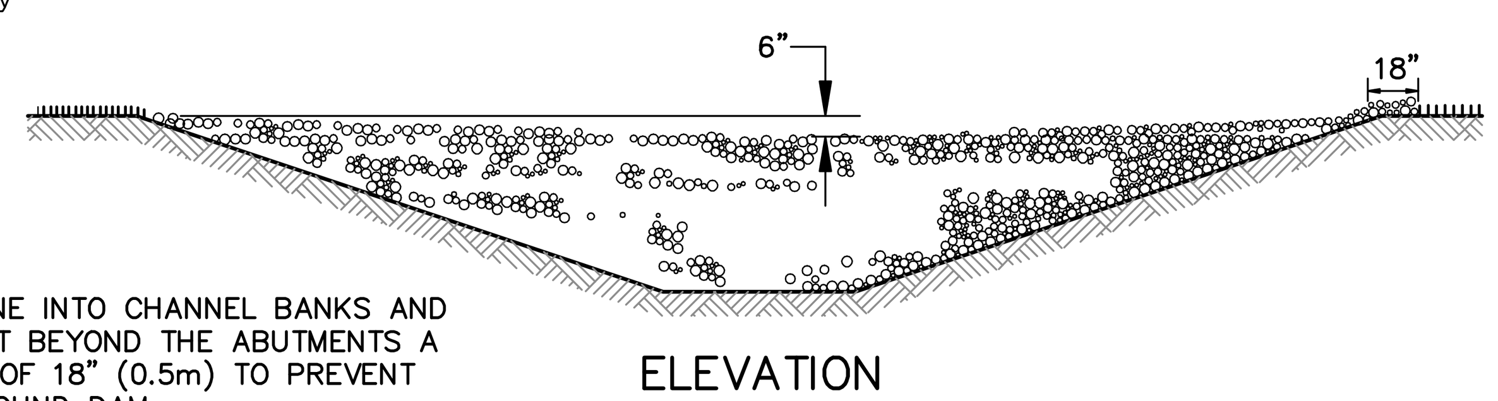
WINTER CONSTRUCTION

1. WINTER CONSTRUCTION PERIOD: OCTOBER 1 THROUGH APRIL 15
2. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRES OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
3. EXPOSED AREA SHOULD BE LIMITED TO THAT WHICH CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.
4. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO MORE THAN ONE ACRE OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION.
5. OVERWINTER STABILIZATION OF DITCHES AND CHANNELS:
   ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL GRASS LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. IF A DITCH OR CHANNEL IS NOT GRASS-LINED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE DITCH FOR LATE FALL AND WINTER.
   A. INSTALL A SOD LINING IN THE DITCH:
      A DITCH MUST BE LINED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES: PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING SOD AT THE BASE OF THE DITCH WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD FROM SLOUGHING DURING FLOW CONDITIONS. SEE THE PERMANENT VEGETATION BMP SECTION.
   B. INSTALL A STONE LINING IN THE DITCH:
      A DITCH MUST BE LINED WITH STONE RIPRAP BY NOVEMBER 15. A REGISTERED PROFESSIONAL ENGINEER MUST BE HIRED TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE CONTRACTOR WILL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.
6. OVERWINTER STABILIZATION OF DISTURBED SLOPES:
   ALL STONE-COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL SLOPES TO BE VEGETATED MUST BE SEEDED AND MULCHED BY SEPTEMBER 1. THE DEPARTMENT WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% TO BE A SLOPE. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER. STABILIZE THE SOIL WITH TEMPORARY VEGATATION AND EROSION CONTROL MATS. BY OCTOBER 1 THE DISTURBED SLOPE MUST BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE SLOPE BY NOVEMBER 1, THEN THE CONTRACTOR WILL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP AS DESCRIBED IN THE FOLLOWING STANDARDS.
   A. STABILIZE THE SOIL WITH SOD:
      THE DISTURBED SLOPE MUST BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR WILL NOT USE LATE SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
   B. STABILIZE THE SOIL WITH EROSION CONTROL MIX:
      EROSION CONTROL MIX MUST BE PROPERLY INSTALLED BY NOVEMBER 15. THE CONTRACTOR WILL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE. SEE THE TEMPORARY MULCHING BMP SECTION.
   C. STABILIZE THE SOIL WITH STONE RIPRAP:
      PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE DEVELOPMENT'S OWNER WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP. SEE THE RIPRAP SLOPE STABILLIZATION BMP SECTION.
7. OVERWINTER STABILIZATION OF DISTURBED SOILS:
   BY SEPTEMBER 15, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% MUST BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.
   A. STABILIZE THE SOIL WITH TEMPORARY VEGETATION:
      BY OCTOBER 1, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOILD BEFORE NOVEMBER 1, THEN MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED BELOW.
   B. STABILIZE THE SOIL WITH SOD:
      STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLINIG THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
   C. STABILIZE THE SOIL WITH MULCH:
      BY NOVEMBER 15, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.
8. MAINTENANCE:
   MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL, IN THE SPRING, INSPECT AND REPAIR ANY DAMAGES AND/OR BARE SPOTS. AN ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 85 TO 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

   STABILIZATION SCHEDULE BEFORE WINTER:

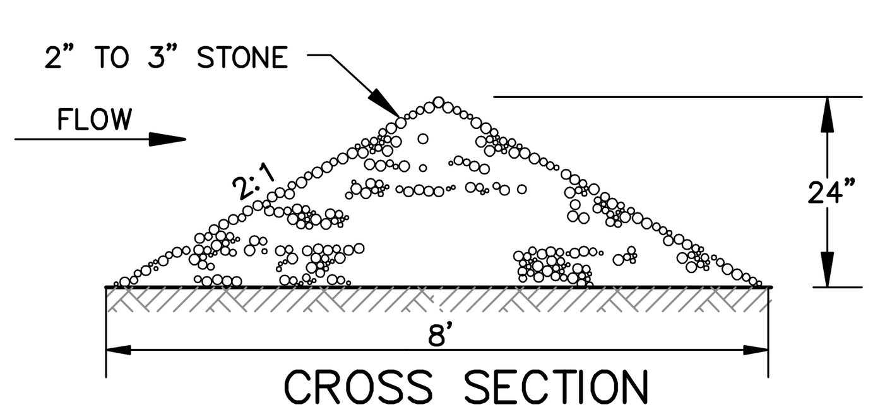
SEPTEMBER 15	ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED. ALL SLOPES MUST BE STABILIZED, SEEDED AND MULCHED. ALL GRASS LINED DITCHES AND CHANNELS MUST BE STABILIZED WITH MULCH OR AN EROSION CONTROL BLANKET
OCTOBER 1	IF THE SLOPE IS STABILIZED WITH AN EROSION CONTROL BLANKET AND SEEDED. ALL DISTURBED AREAS TO BE PROTECTED WITH AN ANNUAL GRASS MUST BE SEEDED AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND MULCHED.
NOVEMBER 15	ALL STONE LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED. SLOPES THAT ARE COVERED WITH RIPRAP MUST BE CONSTRUCTED BY THAT DATE.

9. DURING WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.
10. AREAS WITHIN 100 FEET OF STREAMS THAT ARE NOT STABILIZED WITH VEGETATION BY DEC. 1 SHALL BE MULCHED AND ANCHORED WITH NETTING. IF WORK CONTINUES IN THIS AREA DURING THE WINTER, A DOUBLE LINE OF SEDIMENT BARRIERS MUST BE USED.



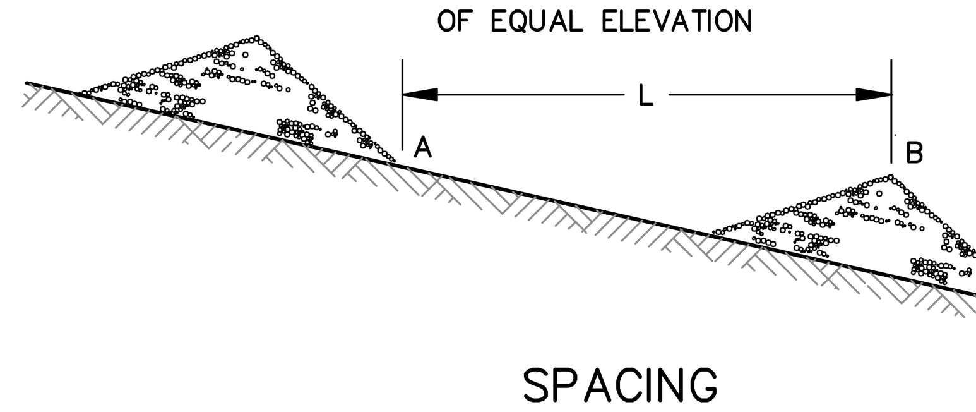
NOTE:
KEY STONE INTO CHANNEL BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIMUM OF 18" (0.5m) TO PREVENT FLOW AROUND DAM.

ELEVATION



CROSS SECTION

L = DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION

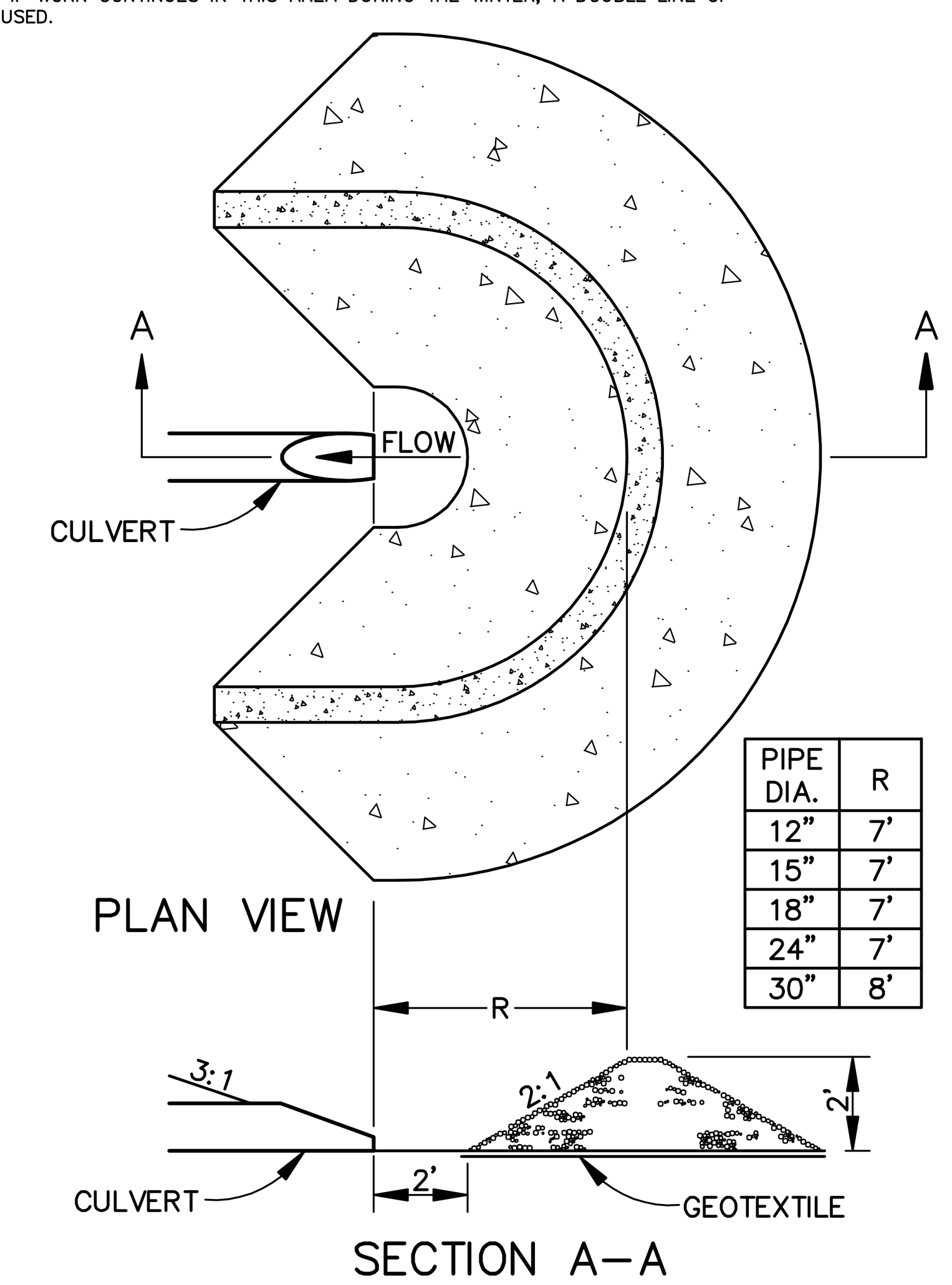


SLOPE (FT/FT)	L (FT)
0.020	100
0.030	66
0.040	50
0.050	40
0.080	25
0.100	20
0.120	17
0.150	13

SPACING

STONE CHECK DAM DETAIL

NTS



PIPE DIA.	R
12"	7'
15"	7'
18"	7'
24"	7'
30"	8'

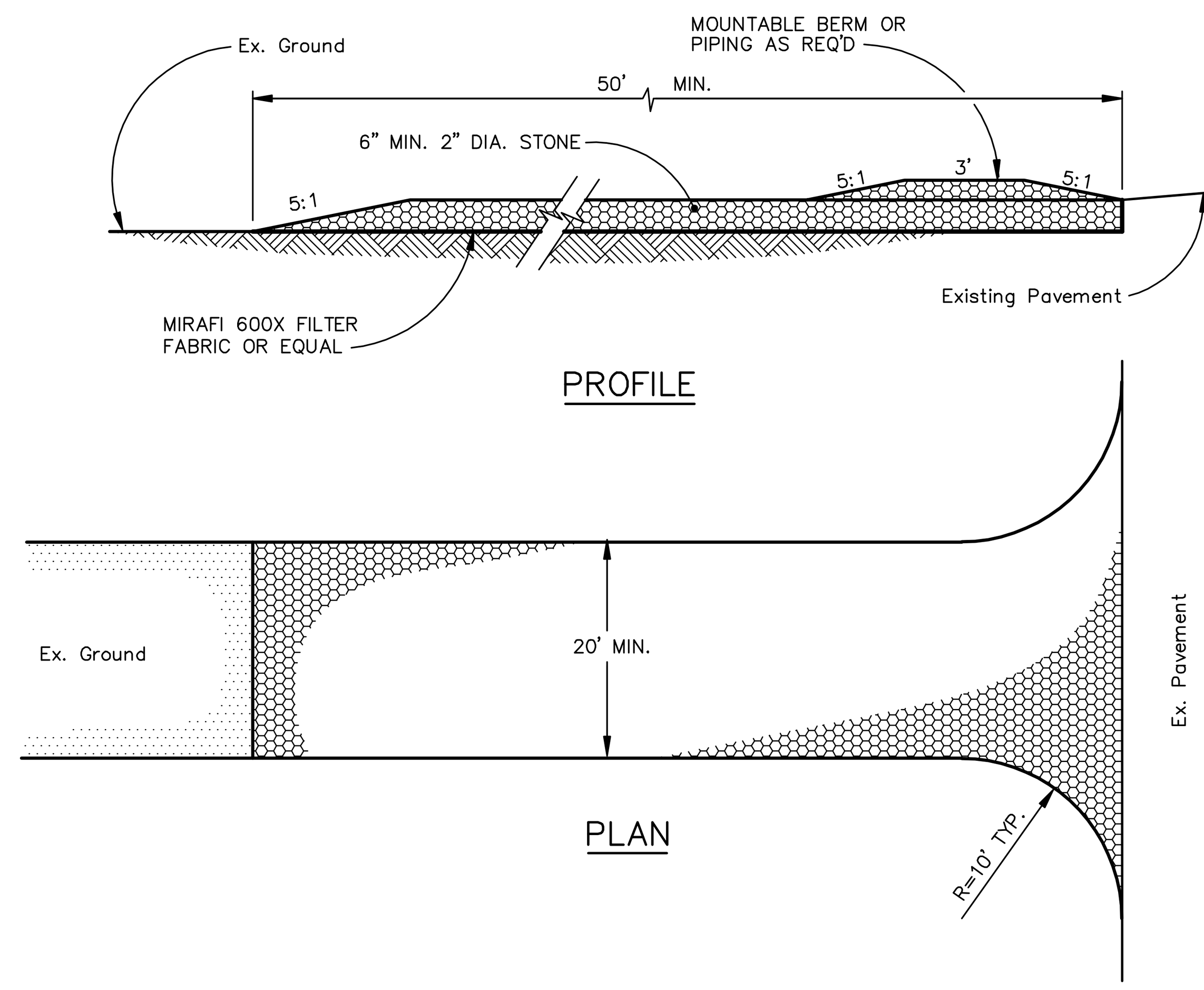
PLAN VIEW

SECTION A–A

1. USE 2" TO 3" STONE.
2. PLACE STONE OVER GEOTEXTILE.
3. ONCE THE AREAS UPSTREAM FROM THE CHECK DAM ARE STABILIZED BY VEGETATION, THE SEDIMENT TRAPPED BEHIND/WITHIN THE DAM SHALL BE RELOCATED TO AN AREA UNDERGOING FINAL GRADING.
4. THE CHECK DAMS SHALL BE FLATTENED AND GRADED IN A MANNER WHICH PROTECTS THE AREA FROM EROSION AND CHANNEL BLOCKAGE. (GEOTEXTILE MUST BE REMOVED)
5. THE GEOTEXTILE SHALL BE DISPOSED OF OFFSITE.
6. THE AREA CONTRIBUTING TO THE CHECK DAM SHALL NOT EXCEED 10 ACRES.

TEMPORARY CHECK DAM AT CULVERT INLET

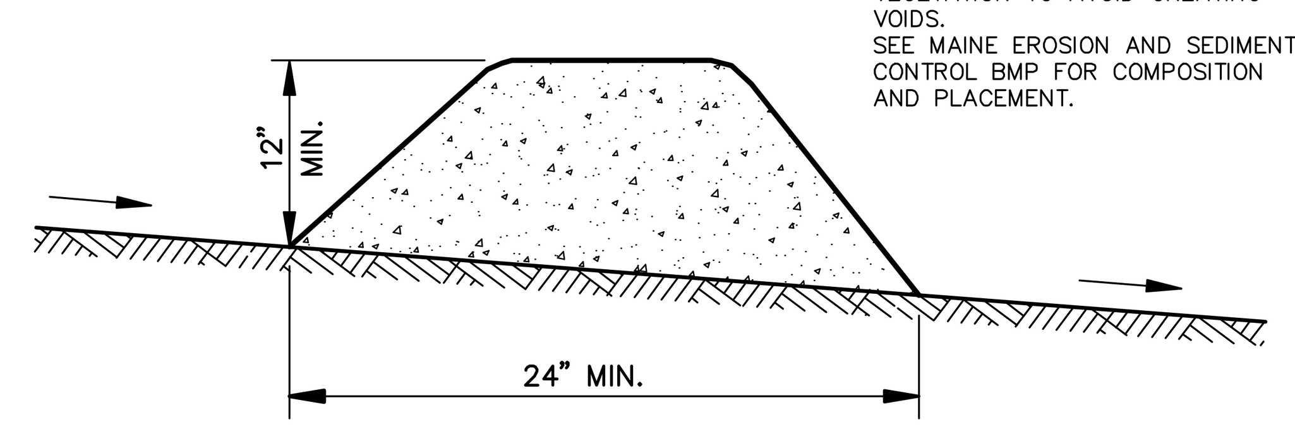
NTS



STABILIZED CONSTRUCTION ENTRANCE

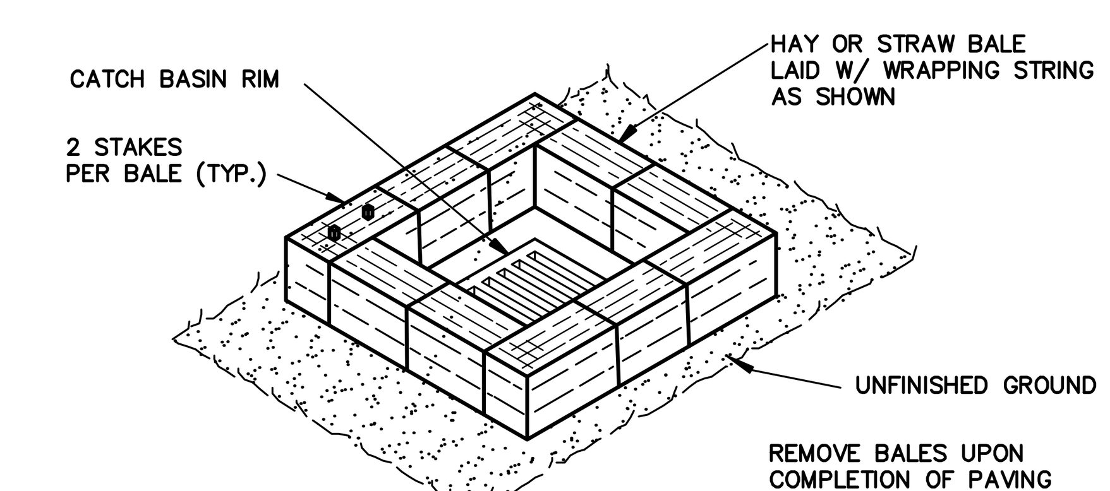
NTS

PLACE BARRIER ALONG RELATIVELY LEVEL CONTOUR.
REMOVE TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS.
SEE MAINE EROSION AND SEDIMENT CONTROL BMP FOR COMPOSITION AND PLACEMENT.



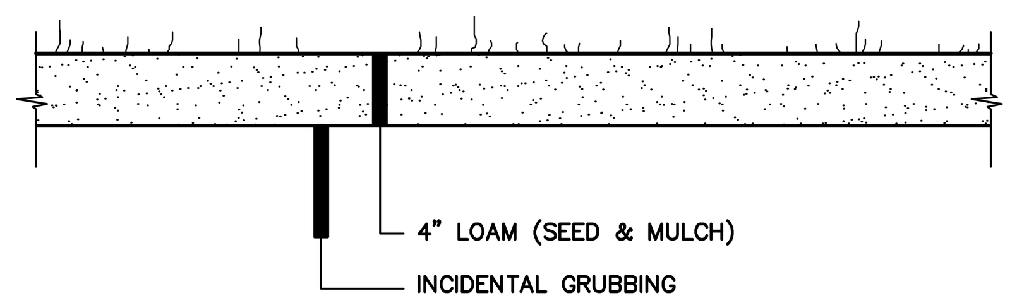
EROSION CONTROL MIX BERM

NTS



LOW POINT SEDIMENT CONTROL BARRIER

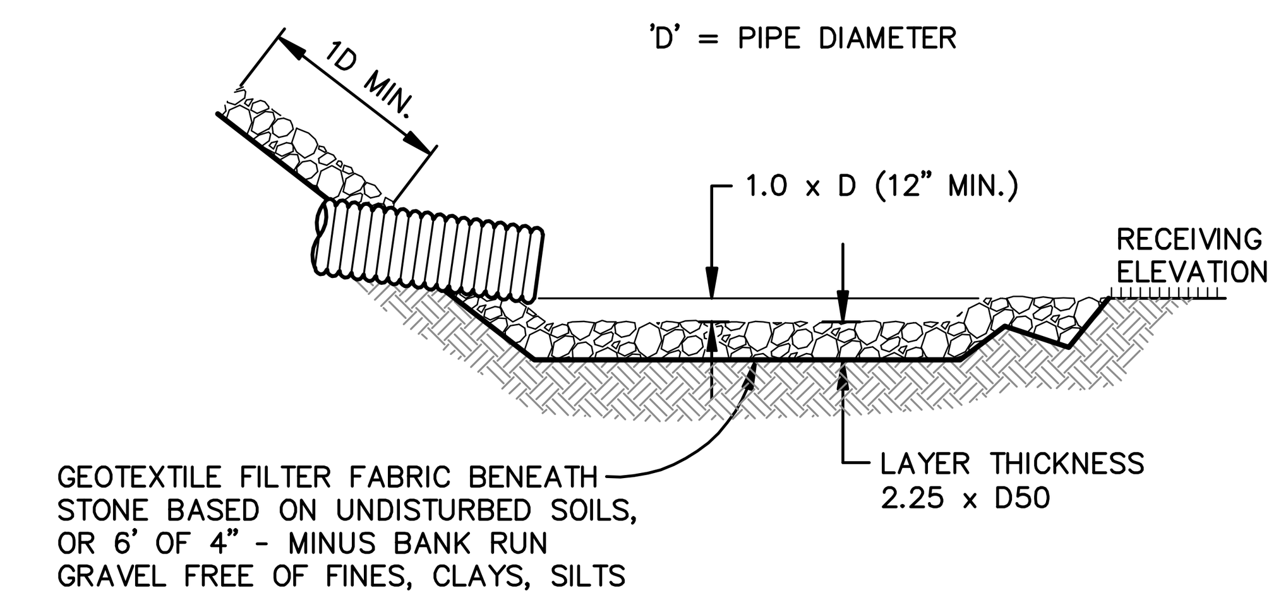
N.T.S.



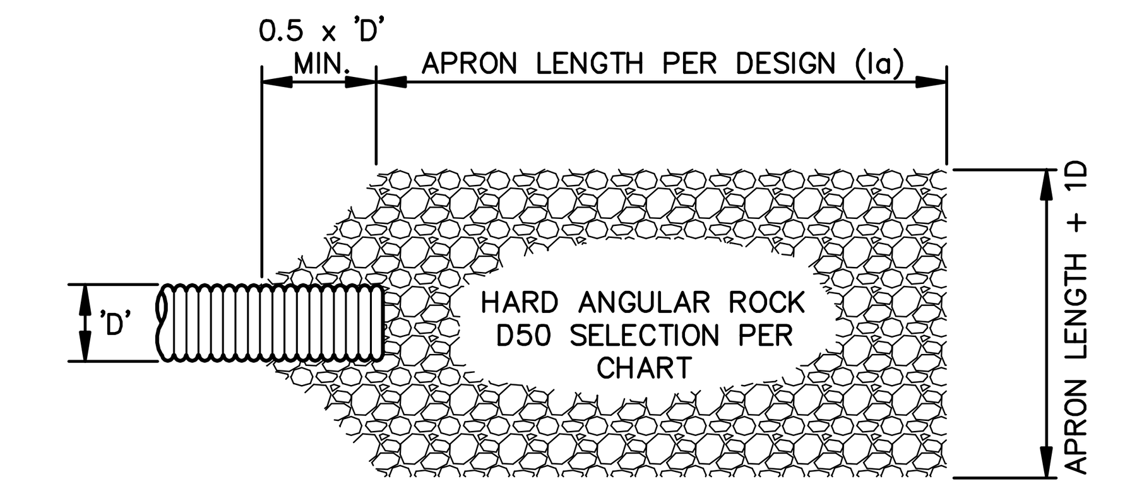
TYPICAL LOAM DETAIL

N.T.S.

'D' = PIPE DIAMETER



SECTION



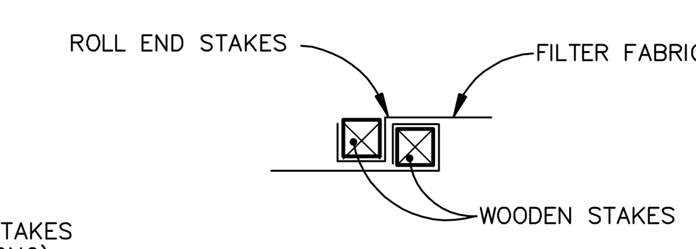
PLAN

NOTES:

1. CONSULT WITH IF&W IF FISH PASSAGE WILL BE INHIBITED DURING LONG FLOWS.
2. REFER TO DESIGN NOTES AND LIMITATIONS IN TEXT NO PIPE OUTLET PROTECTION.
3. IN DEFINED CHANNELS, APRON SHALL EXTEND FULL WIDTH OF BOTTOM AND ONE FOOT ABOVE MAX. TAILWATER OR UP TO BANK FULL, WHICHEVER IS LESS.

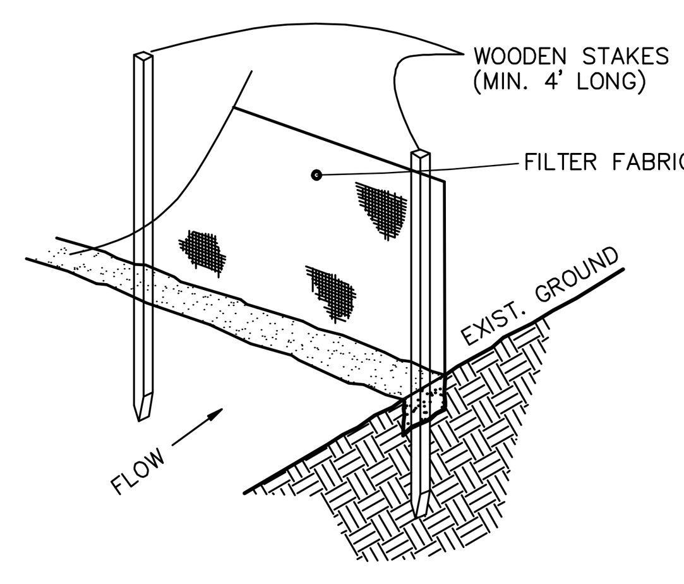
PIPE OUTLET PROTECTION

NTS



END POST DETAIL

NTS



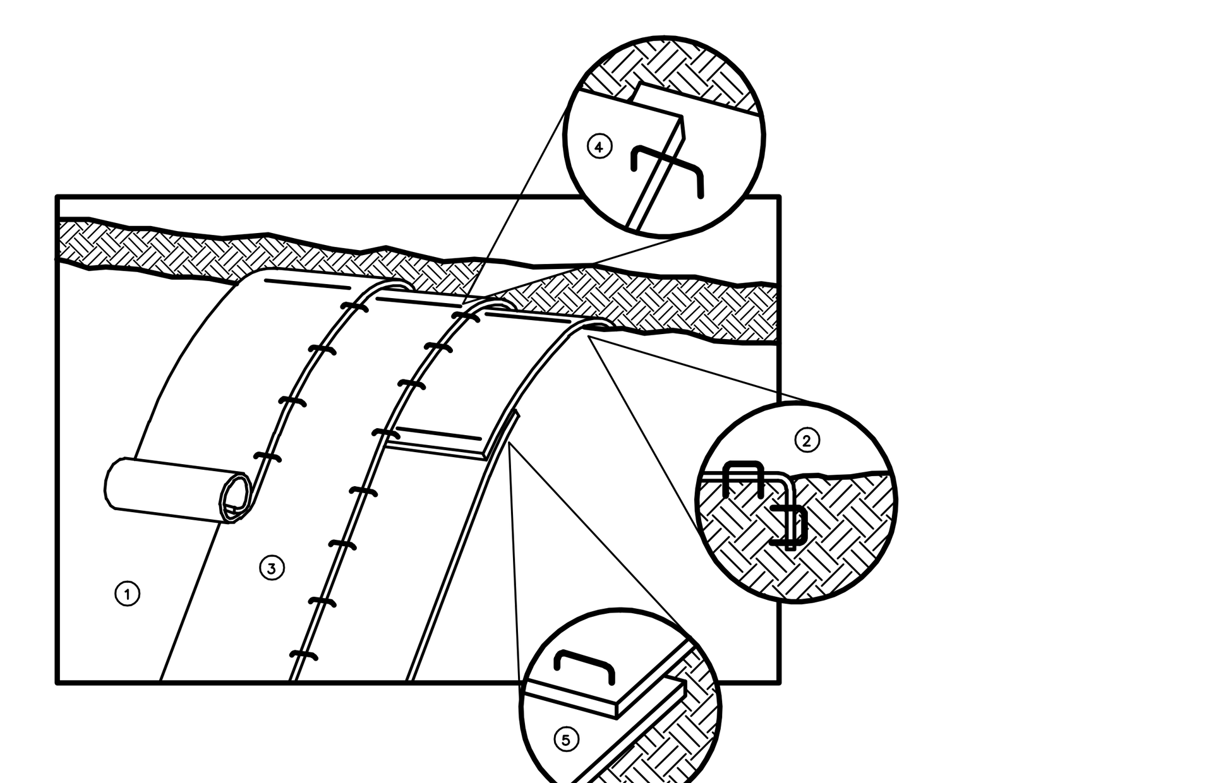
1. KEY FABRIC IN A 4"X4" TRENCH W/ BACKFILL.
2. SILT FENCE SHALL BE A 3' FENCE OF 120LB/M (W/ REINF. BACK OF 6" WIRE MESH, POSTS 10' O.C.) OR 200LB/M (W/ NO REINF. POSTS 6' O.C.)
3. INSTALL PER CUMBERLAND COUNTY S.W.C.D. STANDARDS

SILT FENCE DETAIL

N.T.S.

1. Prepare soil before installing blankets, including lime, fertilzer & seed.
2. Begin at top of slope by anchoring blanket in 6" x 6" trench. Backfill & compact trench after stapling.
3. Roll blankets down or horizontally across slope.
4. The edges of parallel blankets must be stapled with approx. 2" overlap.
5. When blankets must be spliced down the slope, place blankets end over end (shingle style) with approx. 4" overlap. Staple through overlapped area, approx. 12" apart.

Slope Stabilization:
Erosion Control Blanket shall be in accordance with M.D.O.T. standard specifications, Section 6.13, Temporary Erosion Control Blankets and Extended Use Erosion Control Blankets.



Slope Stabilization Detail

N.T.S.

NO.	DATE	REVISION DESCRIPTION

BH2M
Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors
28 State Street
Gorham, Maine 04038
Tel. (207) 839-2771
Fax (207) 839-8250

FOR
The Town Of Standish
175 Northeast Road
Standish, Maine 04084

EROSION CONTROL PLAN & DETAILS

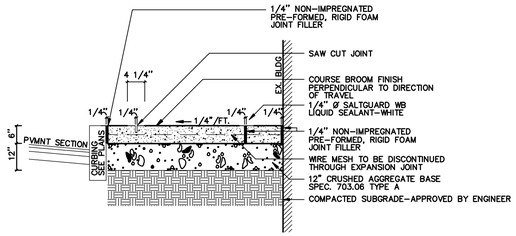
ROUTE 25 & OAK HILL ROAD IMPROVEMENT PROJECTS

ROUTE 25 AND OAK HILL ROAD
STANDISH, MAINE

DESIGNED	DATE
W. Pelkey	Jan. 2012
DRAWN	SCALE
Dept.	As Noted
CHECKED	JOB. NO.
L. Berry	11107

SHEET

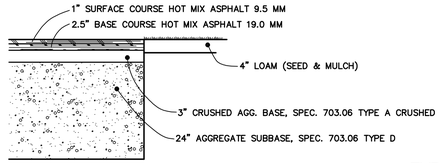
7



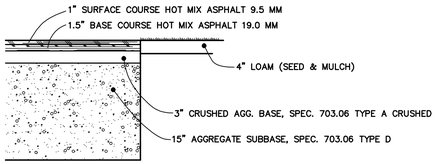
CONCRETE SIDEWALK
NTS

CONCRETE NOTES:

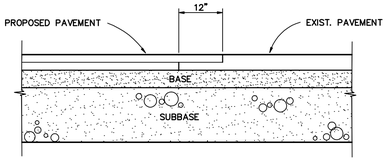
1. REFERENCE IS MADE TO ACI MANUAL OF PRACTICE, 2010 FOR SPECIFICATIONS AND PRACTICES.
2. CONCRETE: 4,000 PSI @ 28 DAYS; 3/4" MAXIMUM AGGREGATE SIZE; AIR ENTRAINMENT 3-5%; SLUMP 4" MAX.
3. REINFORCEMENT: WELDED WIRE MESH, EPOXY COATED 6X6 6/6 HEAVY GAUGE SHEET DISCONTINUED THROUGH JOINTS
4. FINISH: SCREED AND BULL FLOAT, BROOM FINISH
5. JOINTS: SAWCUT JOINTS TO 1/3" DEPTH WITHIN 24 HOURS OF PLACEMENT; PROVIDE AT 5' ON CENTER MINIMUM; EXPANSION JOINTS TO FULL DEPTH OF CONCRETE SLAB WITH JOINT FILLER; PROVIDE AT 25' ON CENTER MINIMUM DISTANCE AND AT ALL APPROPRIATE CONNECTIONS SUCH AS WITH CURBS, BUILDINGS, STAIRS OR ANY OTHER STRUCTURES
6. CURING: APPLY APPROVED CURING COMPOUND
7. SEALING: APPLY SALTGUARD WB WHITE LIQUID SEALANT OR EQUIVALENT PER MANUFACTURES SPECIFICATIONS



TYP. PAVEMENT DETAIL-OAK HILL ROAD (LOCAL RD)
NTS

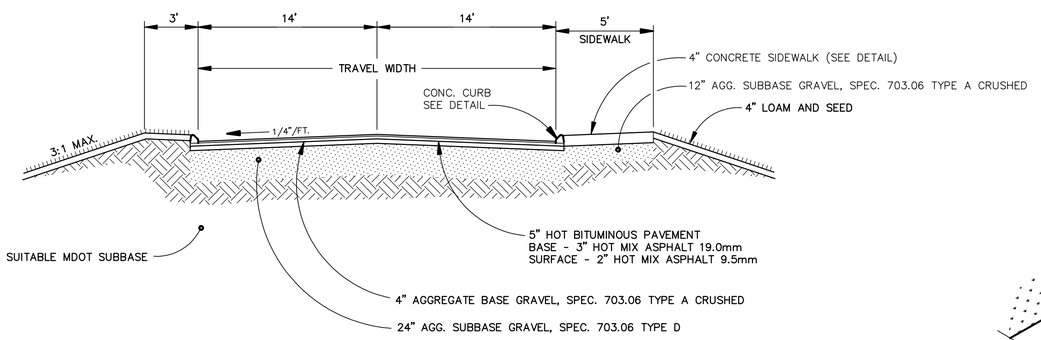


TYP. PAVEMENT DETAIL-DRIVEWAYS
NTS

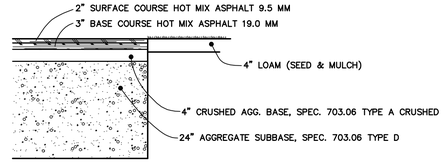


SAWCUT EXIST. PAVEMENT ALONG A SMOOTH LINE TO A NEAT EVEN VERTICAL JOINT, APPLY TACK PRIOR TO PROPOSED PAVING (AS REQ'D)

PAVEMENT JOINT DETAIL
N.T.S.

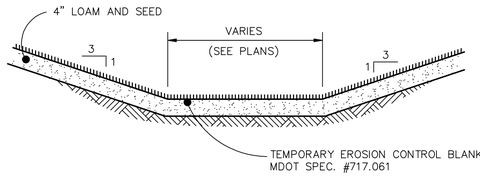


CONNECTOR ROAD SECTION
NTS

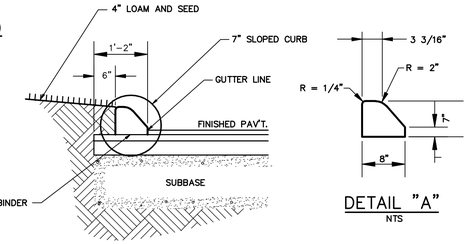


TYP. PAVEMENT DETAIL-ROUTE 25 (COLLECTOR RD)
NTS

1. GRADING: ALL STREETS, ROADS, WALKS ETC. SHALL BE GRADED TO THEIR FULL WIDTH BY THE DEVELOPER (SUBDIVIDER) SO THAT PAVEMENTS AND SIDEWALKS CAN BE CONSTRUCTED ON PARALLEL PROFILES.
2. PREPARATION: BEFORE GRADING IS STARTED, THE ENTIRE RIGHT-OF-WAY AREA SHALL BE CLEARED OF ALL STUMPS, ROOTS, BRUSH AND OTHER OBJECTIONABLE MATERIAL AND ALL TREES NOT INTENDED FOR PRESERVATION, AS DESIGNATED BY THE TOWN ENGINEER.
3. CUTS: TREE STUMPS AND OTHER ORGANIC MATERIALS SHALL BE REMOVED TO A DEPTH OF 2 FEET BELOW THE SUB GRADE. ROCKS AND BOULDERS, WHEN ENCOUNTERED, SHALL BE REMOVED TO SUB GRADE.
4. FILL: ALL MATERIAL USED IN THE CONSTRUCTION OF EMBANKMENTS SHALL BE OF THE QUALITY TO MEET THE STANDARDS FOR EMBANKMENT CONSTRUCTION, SECTIONS 203.02 THROUGH 203.17 OF THE MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, EXCEPT THAT COMPACTION SHALL NOT BE LESS THAN 95% OF MAXIMUM DENSITY (PER ASTM D 1557 MOD.). EXCESS MATERIALS INCLUDING ORGANIC MATERIALS, SOFT CLAYS, WET AND NON COMPACTABLE MATERIALS, ETC. SHALL BE REMOVED FROM THE STREET SITE. THE FILL SHALL BE SPREAD IN LAYERS NOT TO EXCEED 8 INCHES LOOSE AND THEN COMPACTED. THE FILLING OF UTILITY TRENCHES AND OTHER PLACES SHALL BE MECHANICALLY TAMPERED.
5. ALL MATERIALS AND CONSTRUCTION REQUIREMENTS SHALL CONFORM TO MDOT STANDARD SPECIFICATIONS, REVISION DEC. 2002
6. THE BASE AND SURFACE PAVEMENT THICKNESS NOTED IS THE MINIMUM REQUIRED THICKNESS. CORES WILL BE TAKEN TO VERIFY. FAILURE TO MEET THE MINIMUM THICKNESS IS CAUSE FOR NOT ACCEPTING ROADWAYS.



VEGETATED DITCH DETAIL
NTS



DETAIL "A"
NTS

1 LB. FIBER MESH SHALL BE ADDED TO EVERY CUBIC YARD OF CONCRETE. THE CONCRETE WILL CONTAIN THE MAXIMUM AMOUNT OF WATER TO BE OF A CONSISTENCY THAT THE CONCRETE WILL MAINTAIN THE SHAPE OF THE CURB SECTION WITHOUT SUPPORT. THIS MIX ALSO MEETS THE READY MIX REQUIREMENTS OF ASTM C94 AND WILL MEET OR EXCEED 4,000 PSI IN 28 DAYS.

THE PAVEMENT SHALL BE THOROUGHLY CLEANED TO REMOVE DUST, DIRT AND OIL BEFORE APPROVED ADHESIVE IS APPLIED PER MANUFACTURERS SPECIFICATIONS.

THE FIBER REINFORCED MIX SHALL BE FED INTO THE VIBRATING HOPPER WHERE IT IS COMPACTED INTO THE DESIRED MOLD PROFILE.

FRESHLY EXTRUDED CURB SHALL BE LIGHTLY TOUCHED UP WITH A STEEL HAND TROWEL. CONTROL JOINTS SHALL BE TOOLED AS SOON AS POSSIBLE AT 9' INTERVALS. ADDITIONAL CONTROL JOINTS ADDED ON RADIUS AS NECESSARY.

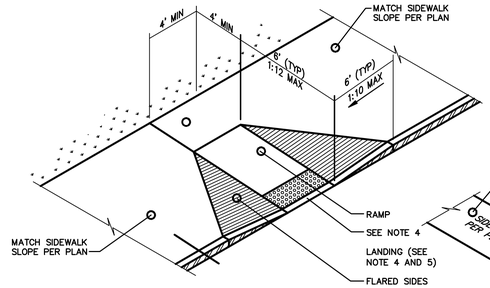
THE FINISHED CURB WILL BE COATED WITH AN APPROVED CURING COMPOUND.

FOLLOW MANUFACTURERS INSTALLATION INSTRUCTIONS AND TEMPERATURE RESTRICTIONS.

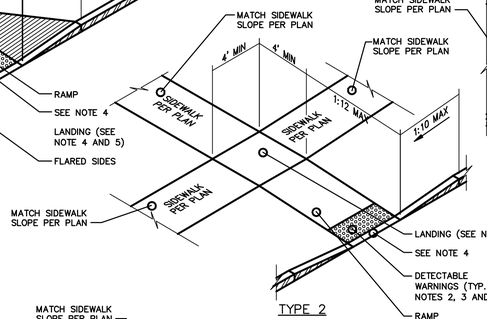
EXTRUDED CONCRETE CURB
NTS

NOTE:

1. THESE DETAILS ARE TYPICAL STANDARDS INTENDED TO SHOW GENERAL INTENT. SPECIFIC INTERSECTION DETAILS ARE SHOWN ON SHEETS 4-6.



TYPE 1



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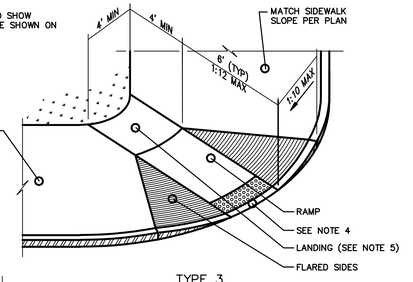

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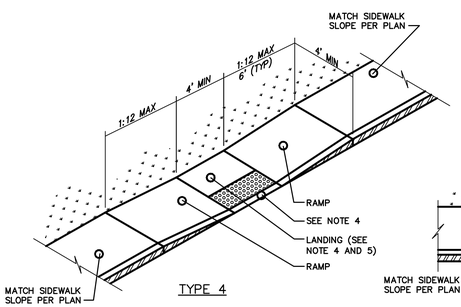

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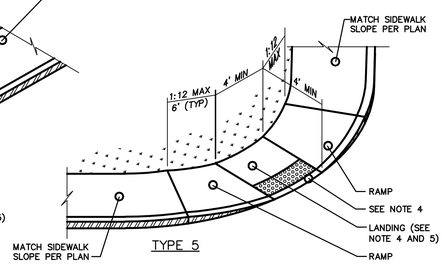


TYPE 5

BARRIER FREE RAMP-ONSITE
N.T.S.

NOTE:

1. CURB RAMP LENGTHS ARE BASED ON SEVEN AND ONE HALF (7.5) INCH CURB REVEAL HEIGHT AND NO RUNNING SLOPE. RAMP LENGTHS SHALL BE ADJUSTED AS NECESSARY TO ACCOMMODATE VARYING CURB REVEAL HEIGHTS AND TO MATCH RUNNING SLOPES OF ADJACENT ROADWAY AND SIDEWALK SLOPES TO MAINTAIN A RAMP THAT DOES NOT EXCEED THE MAXIMUM RAMP SLOPE OF 1:12.
2. DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES AND SHALL HAVE A BASE DIAMETER OF 0.9 INCHES (23 mm) MINIMUM AND 1.4 INCHES (36 mm) MAXIMUM; A TOP DIAMETER OF 50 PERCENT OF THE BASE DIAMETER MINIMUM TO 65 PERCENT OF THE BASE DIAMETER MAXIMUM AND A HEIGHT OF 0.2 INCHES (5.1 mm), A CENTER-TO-CENTER SPACING OF 1.6 INCHES (41mm) MINIMUM AND 2.4 INCHES (61mm) MAXIMUM; AND A BASE-TO-BASE SPACING OF 0.65 INCHES (17mm) MINIMUM, MEASURED BETWEEN THE MOST ADJACENT DOMES ON A SQUARE GRID.
3. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT.
4. ALL ACCESSIBLE ROUTE SIDEWALKS INTERSECTING ROADWAYS, DRIVEWAYS, OR OTHER VEHICULAR CROSSINGS REQUIRE DETECTABLE WARNINGS. DETECTABLE WARNING ZONES SHALL BE INSTALLED SIX (6) INCHES (OR THE HORIZONTAL THICKNESS OF THE ADJACENT CURB) FROM THE FLOW LINE OF THE CURB, EXTEND INTO THE SIDEWALK FOR A 24" DEPTH, AND COVER THE COMPLETE WIDTH OF THE SIDEWALK OR RAMP AREA. DETECTABLE WARNING ZONES SHALL CONFORM TO THE SLOPE REQUIREMENTS OF THE RAMP, LANDING, OR ACCESSIBLE ROUTE AS DEFINED IN THE SPECIFIED DETAIL. DETECTABLE WARNINGS SHALL NOT BE INSTALLED IN FLARED SIDES, IF THE RAMP INCLUDES FLARED SIDES.
5. ALL LANDING AREAS SHALL BE 4 FEET WIDE BY 4 FEET LONG (MINIMUM DIMENSIONS). THE SLOPE OF THE LANDING AREA SHALL NOT EXCEED A 1:48 IN ANY DIRECTION.
6. ALL ACCESSIBLE ROUTE SLOPES ADJOINING THE LANDING AREA, EXCLUDING THE CURB RAMP, SHALL NOT EXCEED A SLOPE OF 1:20 UNLESS OTHERWISE NOTED.

NO.	DATE	REVISION DESCRIPTION

BH2M
Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors
28 State Street
Gorham, Maine 04038
Tel. (207) 839-2771
Fax (207) 839-8250

FOR
The Town Of Standish
175 Northeast Road
Standish, Maine 04084

ROADWAY & SIDEWALK DETAILS

ROUTE 25 & OAK HILL ROAD IMPROVEMENT PROJECTS

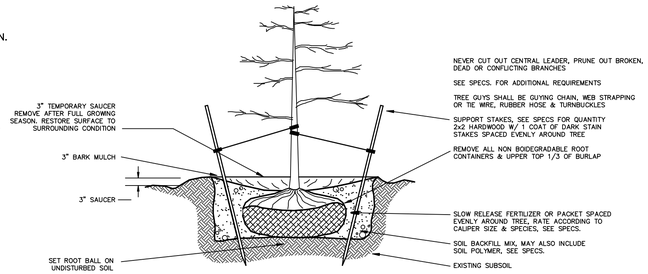
ROUTE 25 AND OAK HILL ROAD
STANDISH, MAINE

DESIGNED	DATE
W. Pelkey	Jan. 2012
DRAWN	SCALE
Dept.	As Noted
CHECKED	JOB. NO.
L. Berry	11107

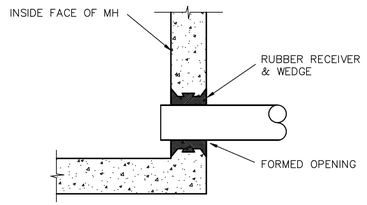
SHEET
8

GENERAL NOTES FOR CONSTRUCTION:

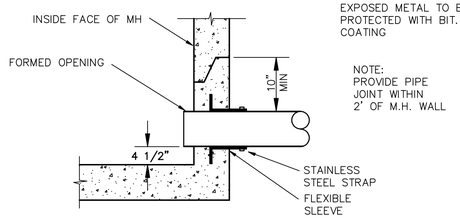
1. STREET PAVING SHALL NOT BEGIN UNTIL SUBGRADE COMPACTION TESTS ARE TAKEN AND THE DESIGN ENGINEER APPROVES THE RESULTS.
2. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE TOWN WITH ATLEAST 24 HOURS ADVANCED NOTICE.
3. MAINTENANCE OF ONSITE DRAINAGE AND EROSION CONTROL FACILITIES DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. TEMPORARY EROSION CONTROL MEASURES SHALL BE PROVIDED BY THE CONTRACTOR DURING CONSTRUCTION AS IDENTIFIED ON THE EROSION CONTROL PLAN.
4. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ALL UTILITIES TO COORDINATE SCHEDULES.
5. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER AND TOWN OF STANDISH.
6. ALL TRAFFIC CONTROL DEVICES, STRIPING AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
7. PAVEMENT REMOVAL AND REPLACEMENT IN THE PUBLIC RIGHT OF WAY:
   - THE CONTRACTOR SHALL CONTACT THE STANDISH DIRECTOR OF PUBLIC WORKS PRIOR TO ANY STREET CUT.
   - THE EXISTING STREET CONDITION SHALL BE DOCUMENTED BY THE TOWN'S ENGINEER BEFORE ANY CUTS ARE MADE.
   - PATCHING SHALL BE DONE IN CONFORMANCE WITH THE CONSTRUCTION PLANS APPROVED BY THE STANDISH DIRECTOR OF PUBLIC WORKS.
   - ANY STREET PATCHING SHOWN ON THE DRAWINGS IS APPROXIMATE. ACTUAL LIMITS OF STREET PATCH SHALL BE DETERMINED BY THE STANDISH DIRECTOR OF PUBLIC WORKS.
   - ALL LARGE PATCHES SHALL BE PAVED WITH AN ASPHALT LAY DOWN MACHINE. IN STREETS WHERE MORE THAN ONE CUT IS MADE, AN OVERLAY OF THE ENTIRE STREET WIDTH, INCLUDING THE PATCHED AREA, MAY BE REQUIRED. THE STANDISH DIRECTOR OF PUBLIC WORKS SHALL MAKE THE DETERMINATION OF THE NEED FOR A COMPLETE OVERLAY.
8. ALL DAMAGED EXISTING CURB, GUTTER, AND SIDEWALK SHALL BE REPAIRED PRIOR TO ACCEPTANCE OF COMPLETED IMPROVEMENTS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE SERVICES OF A QUALIFIED TESTING LABORATORY TO PERFORM ALL COMPACTION TESTING, ASPHALT TESTING, CONCRETE TESTING AND ANY OTHER TESTING AS MAY BE REQUIRED TO COMPLETE THE WORK. QUALITY CONTROL TEST RESULTS MUST BE SUBMITTED TO THE DESIGN ENGINEER FOR ALL PHASES OF THIS PROJECT PER THE TOWN'S REQUIREMENTS.
10. THE CONTRACTOR SHALL MAINTAIN ONE (1) SET OF "REDLINED" PRINTS OF THE CONSTRUCTION PLANS. THE "REDLINED" PRINTS SHALL BE KEPT CURRENT TO ACCURATELY REPRESENT THE DIMENSIONS AND LOCATIONS OF ALL WORK PERFORMED BY THE CONTRACTOR. PRIOR TO FINAL PAYMENT, THE CONTRACTOR MUST PRESENT THE "REDLINED" PRINTS TO THE OWNER'S ENGINEER FOR PREPARATION OF A SET OF REPRODUCIBLE "RECORD DRAWINGS" WHICH SHALL BE SUBMITTED TO THE TOWN WITHIN 30 DAYS OF CONSTRUCTION ACCEPTANCE OF THE PROJECT BY THE TOWN.
11. THE CONTRACTOR SHALL PROVIDE AND IMPLEMENT A "TRAFFIC CONTROL PLAN" RELATED TO ALL CONSTRUCTION ACTIVITIES FOR THIS PROJECT.
12. THE CONTRACTOR SHALL PERFORM ALL WORK ACCORDING TO ALL TOWN, COUNTY, STATE, AND FEDERAL SAFETY AND HEALTH REGULATIONS. IN PARTICULAR, THE TRENCHING, BLASTING AND OPEN EXCAVATION OPERATIONS SHALL COMPLY WITH ALL CURRENT O.S.H.A. REGULATORY REQUIREMENTS.
13. THE CONTRACTOR SHALL HAVE A REGISTERED LAND SURVEYOR RE-ESTABLISH ANY PROPERTY CORNERS INADVERTENTLY DISTURBED DURING CONSTRUCTION OF THIS PROJECT. THIS SHALL INCLUDE RAISING THE GRANITE MONUMENTS OR IRON PIPES/RODS TO MATCH THE PROPOSED SIDEWALK GRADES.
14. ALL GRANITE CURBING AND CULVERTS REMOVED FROM THE PROJECT SHALL REMAIN THE PROPERTY OF THE TOWN OF STANDISH. THE CONTRACTOR SHALL COLLECT AND DELIVER SUCH ITEMS TO THE STANDISH PUBLIC WORKS DEPARTMENT ON MOODY ROAD.
15. EXISTING PUBLIC AND PRIVATE UTILITY AND UNDERGROUND LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE, AND ALL UTILITIES AND PIPES ARE NOT NECESSARILY SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING IN THE FIELD THE LOCATIONS OF UTILITIES SHOWN, AND FOR INVESTIGATING AND IDENTIFYING THE EXISTENCE AND LOCATIONS OF ANY ADDITIONAL PUBLIC AND PRIVATE UTILITIES NOT SHOWN ON THE PLANS, BEFORE COMMENCING ANY EXCAVATIONS, AND SHALL BE RESPONSIBLE FOR REPAIRING ALL UTILITIES AND PIPES, BOTH PUBLIC AND PRIVATE WHETHER SHOWN ON THE PLANS OR NOT, THAT ARE DISTURBED DURING CONSTRUCTION. ALL COSTS INCURRED IN INVESTIGATING AND REPAIRING SAID UTILITIES SHALL BE BORN BY THE CONTRACTOR AND SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE WORK PAID FOR UNDER THE APPLICABLE LUMP SUM AND UNIT PRICES IN THE CONTRACT. UTILITIES INCLUDE BUT ARE NOT LIMITED TO UNDERGROUND ELECTRIC, TELEPHONE, WATER, SEWER, STORM DRAIN, GAS AND CELLAR DRAIN LINES. SEE PROJECT DIRECTORY FOR A LIST OF KNOWN UTILITIES AND CONTACT PERSONS.
16. ALL STRUCTURES INCLUDING EXISTING MANHOLES, VALVE COVERS, CATCH BASINS, ETC. SHALL BE ADJUSTED UP OR DOWN, AS REQ'D. TO MEET FINISH GRADES.
17. ALL NON-PAVED AREAS DISTURBED BY THE CONTRACTOR SHALL BE LOAMED, SEEDED AND MULCHED UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
18. ALL ELEVATIONS SHALL BE TAKEN FROM THE BENCHMARK SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY BENCHMARK ELEVATIONS WITH ENGINEER PRIOR TO USING. DO NOT USE CB OR MH RIMS.
19. WHENEVER THE WORDS "REMOVE" OR "ABANDONED" ARE USED IN REFERENCE TO EXISTING PIPES OR STRUCTURES, IT SHALL MEAN THAT MANHOLES, CATCH BASINS, LEADS AND CROSS CULVERTS SHALL BE REMOVED COMPLETELY AND EXCAVATION FILLED WITH COMPACTED GRANULAR MATERIAL.
20. CONNECTIONS TO EXISTING MANHOLES, PIPES, OR OTHER STRUCTURES SHALL BE INCIDENTAL TO THE COST OF THE PIPE AND NO SEPARATE PAYMENT WILL BE MADE.
21. ALL DRIVEWAYS AND WALKS IMPACTED BY THE PROJECT SHALL BE REPAIRED AS SHOWN IN THE PLANS. THE ENGINEER SHALL DIRECT THE CONTRACTOR AS TO THE METHOD OF DEALING WITH EACH DRIVE AND WALK.



TREE PLANTING & STAKING DETAIL
N.T.S.



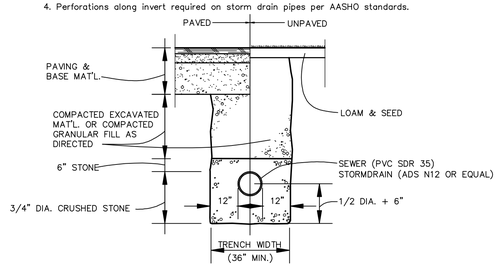
16" THRU 42"



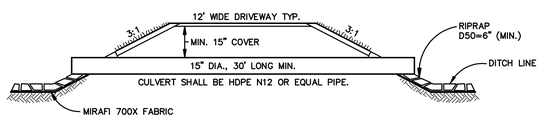
4" THRU 15"

MANHOLE TO PIPE CONNECTION DETAIL
NTS

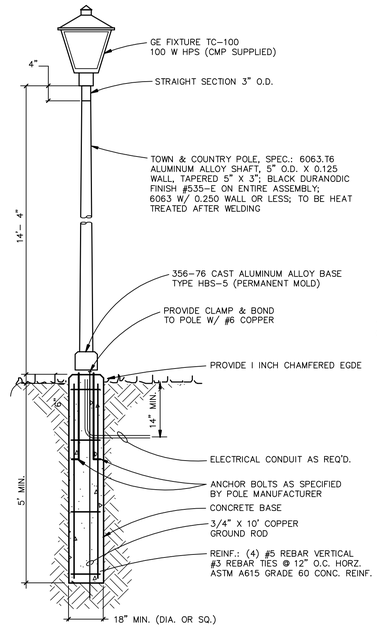
NOTES:
1. Trench width shown is payment width for rockexcavation & replacement of unsuitable material.
2. Do not mechanically compact directly over flexible pipe (e.g. PVC, Poltyethylene)
3. Concrete pipe shall have sand bedding.
4. Perforations along invert required on storm drain pipes per AASHO standards.



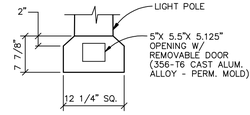
TRENCH DETAIL
NTS



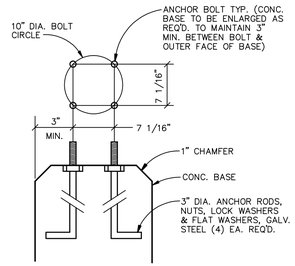
TYPICAL CULVERT SECTION AT DRIVEWAY
NTS



LIGHT POLE DETAIL
N.T.S.

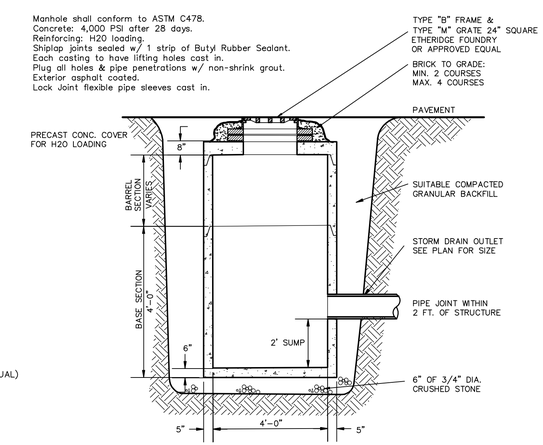


POLE BASE



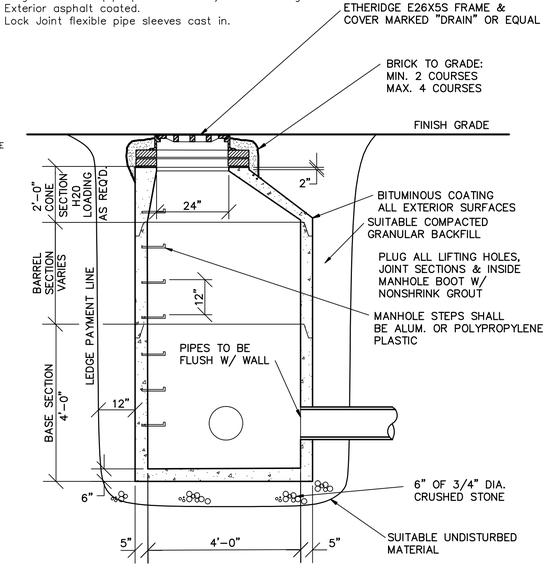
BOLT LAYOUT & MATERIALS

Manhole shall conform to ASTM C478.
Concrete: 4,000 PSI after 28 days.
Reinforcing: H20 loading.
Shiplap joints sealed w/ 1 strip of Butyl Rubber Sealant.
Each casting to have lifting holes cast in.
Plug all holes & pipe penetrations w/ non-shrink grout.
Exterior asphalt coated.
Lock Joint flexible pipe sleeves cast in.



PRECAST CONCRETE CATCH BASIN DETAIL
N.T.S.

Manhole shall conform to ASTM C478.
Concrete: 4,000 PSI after 28 days.
Reinforcing: H20 loading.
Shiplap joints sealed w/ 1 strip of Butyl Rubber Sealant.
Each casting to have lifting holes cast in.
Plug all holes & pipe penetrations w/ non-shrink grout.
Exterior asphalt coated.
Lock Joint flexible pipe sleeves cast in.



PRECAST CONCRETE DRAIN MANHOLE
N.T.S.

NO.	DATE	REVISION DESCRIPTION

BH2M

Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors
28 Saint Street
Gorham, Maine 04038
Tel. (207) 839-2771
Fax (207) 839-8250

FOR
The Town Of Standish
175 Northeast Road
Standish, Maine 04084

STANDARD DETAILS

ROUTE 25 & OAK HILL ROAD IMPROVEMENT PROJECTS
ROUTE 25 AND OAK HILL ROAD
STANDISH, MAINE

DESIGNED	DATE
W. Pelkey	Jan. 2012
DRAWN	SCALE
Dept.	As Noted
CHECKED	JOB. NO.
L. Berry	11107

SHEET
9