

- GENERAL CONSTRUCTION NOTES:**
1. WATER MAINS: ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE TOWNSHIP'S CURRENT STANDARDS, SPECIFICATIONS AND DETAILS (2015 GRAND TRAVERSE COUNTY TECHNICAL SPECIFICATIONS).
 2. WATER MAINS: ALL ELEVATIONS SHALL BE BASED ON USGS OR NGVD DATUM.
 3. WATER MAINS: DETAILS OF PIPE BEDDING, THRUST BLOCKS, HYDRANT, VALVES, W/ LIVE MAINHOLES, AND ALL APPURTENANCES SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATION DETAILS.
 4. SANITARY SEWERS: ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND DETAILS.
 5. SANITARY SEWERS: NO CONNECTION RECEIVING STORM-WATER OR GROUND-WATER SHALL BE MADE TO SANITARY SEWERS.
 6. SANITARY SEWERS: DETAILS OF PIPE BEDDING, BUILDING SEWERS, DROP CONNECTION, BULKHEADS, MANHOLES, MANHOLE COVERS, AND OTHER APPURTENANCES SHALL BE SUBMITTED IN ACCORDANCE WITH THE STANDARD DETAILS.
 7. EACH PUBLIC UTILITY SHALL BE WITHIN ITS OWN 20'-WIDE EASEMENT CENTERED ON THE UTILITY (SEE SHEET C7.0).
 8. ALL PRIVATE UTILITIES SHALL BE WITHIN A 10'-WIDE EASEMENT ADJACENT TO THE PROPOSED RIGHT-OF-WAY (SEE SHEET C7.0).
 9. SEE SHEETS C6.1 - C6.5 FOR PUBLIC UTILITY PLANS & PROFILES.
 10. THE DOMESTIC WATER AND FIRE PROTECTION SERVICES ARE SEPARATE CONNECTIONS TO EACH BUILDING.
 11. SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DETAILS OF THE UTILITY CONNECTIONS AT THE BUILDING.
 12. THE CONTRACTOR SHALL FOLLOW ALL STATE REGULATIONS FOR CONFINED SPACE ENTRY.
 13. COORDINATE WORK WITH THE GRAND TRAVERSE COUNTY DPW AND PROVIDE 48 HOURS NOTICE PRIOR TO BEGINNING CONSTRUCTION.
 14. ALL WATER MAINS SHALL MAINTAIN A MINIMUM OF 10' HORIZONTAL SEPARATION AND 1.5' VERTICAL SEPARATION FROM SANITARY AND STORM SEWERS.
 15. ALL 6"-12" PVC WATER MAIN SHALL BE C-900 DR 14 (HIGH PRESSURE). ALL 16" PVC WATER MAIN SHALL BE C-905 DR 18 (LOW PRESSURE). ALL METALLIC LOCATOR TAPE AND ABOVE GROUND MARKERS IN COMPLIANCE WITH SECTION 9 SPECIFICATIONS SHALL INCLUDE "HIGH PRESSURE" AND "LOW PRESSURE" RESPECTIVELY TO DIFFERENTIATE BETWEEN THE 12" HIGH PRESSURE AND 16" LOW PRESSURE MAINS.

BM#1: ELEV = 800.24
TOP OF WELL HEAD
N 9510.1640 E 6644.8904

BM#2: ELEV = 842.73
SPIKE IN UTILITY POLE
N 9429.3244 E 6654.7264

830 Congernew Dr., Ste. 201
Traverse City, MI 49685
Phone: 231-946-9310
www.mansfield.com
info@mansfield.com

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REV.	DATE	BY	CHK	DESCRIPTION
12	12-20-16	dim	dim	Site plan showing final easement
13	01-04-17	dim	dim	Revised temporary turn-around
14	02-21-17	dim	dim	Revised Easements, Fences
15	03-14-17	dim	dim	Revised wall height
16	04-24-17	dim	dim	Added Sewer Easements for Utility
17	07-12-17	dim	dim	Township Construction Plans & Permit Submittal
18	08-11-17	dim	dim	Township DPOT Construction Plans & Permit Submittal
19	09-25-17	dim	dim	Township DPOT Construction Plans & Permit Submittal

Ken Schmidt
Vineyard Ridge
OVERALL UTILITY PLAN
Section 36, Town 28 North, Range 11 West
Peninsula Township, Grand Traverse County, Michigan

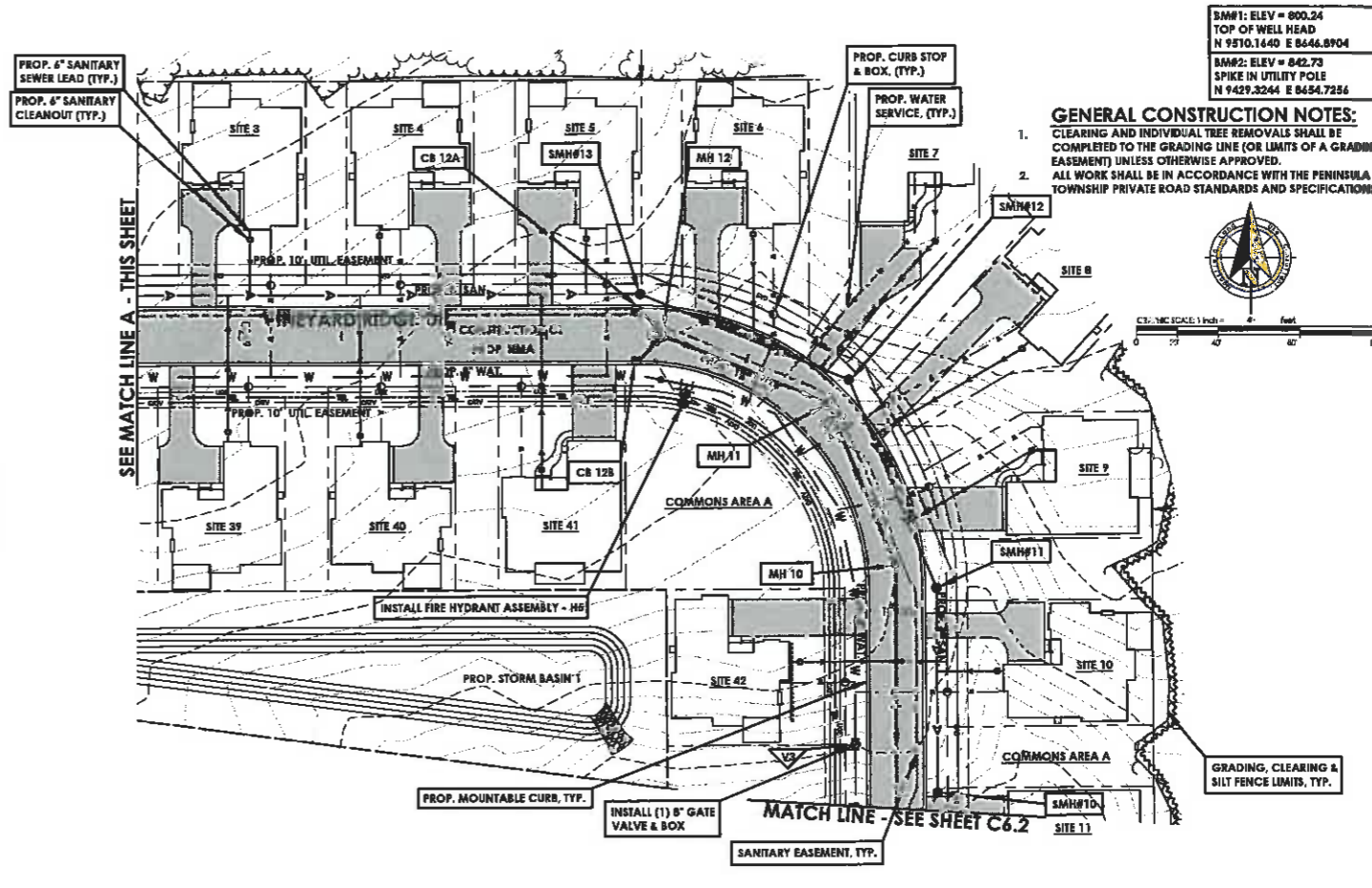
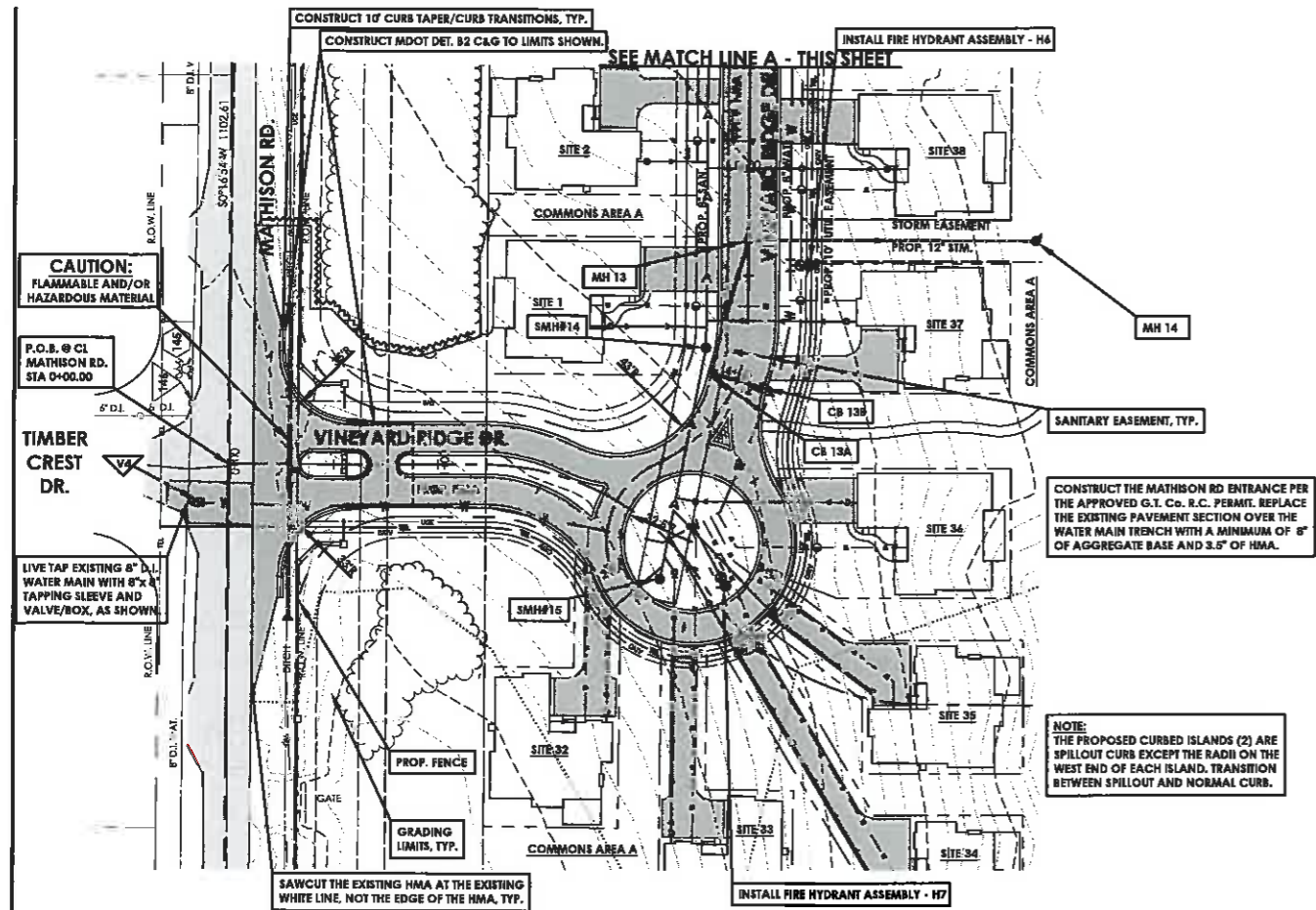
CONSTRUCTION

dim

DR. C.T.P. / A.S.A.B. / 2.8.16

15119

C6.0

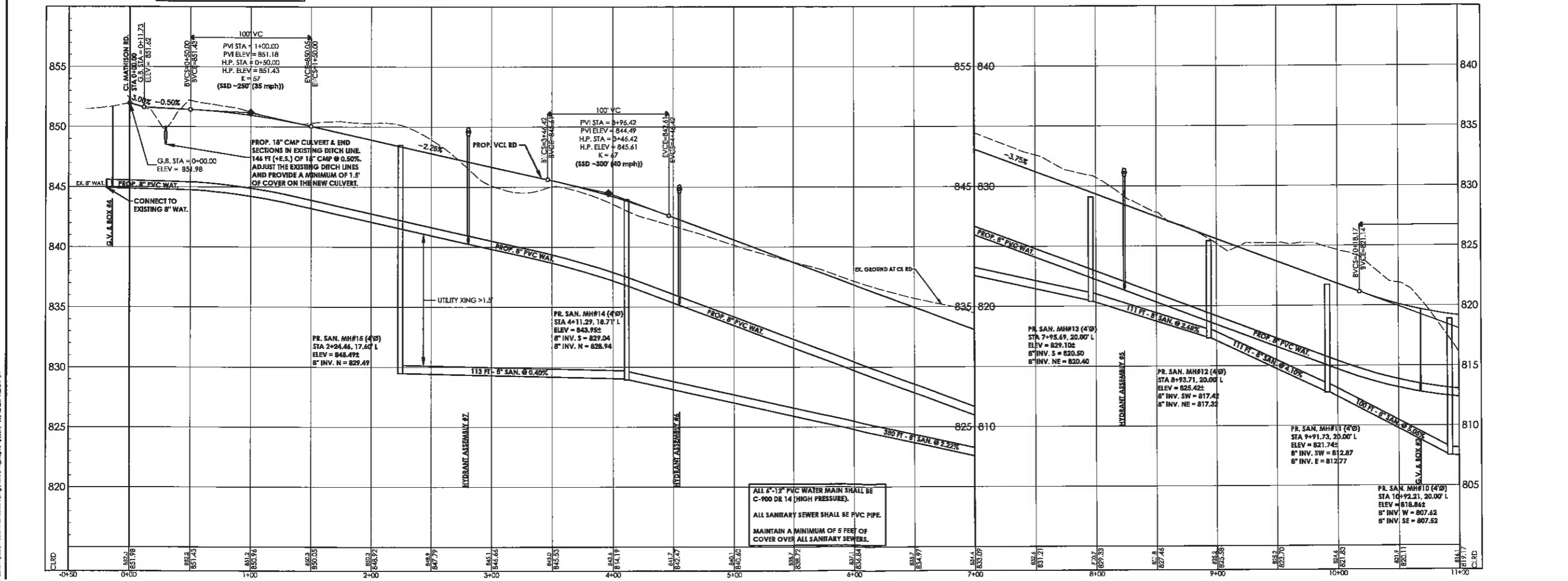


BM#1: ELEV = 800.24
 TOP OF WELL HEAD
 N 95701440 E 8464.8904
 BM#2: ELEV = 842.73
 SPIKE IN UTILITY POLE
 N 9429.3244 E 8454.7254

- GENERAL CONSTRUCTION NOTES:**
- CLEARING AND INDIVIDUAL TREE REMOVALS SHALL BE COMPLETED TO THE GRADING LINE (OR LIMITS OF A GRADING EASEMENT) UNLESS OTHERWISE APPROVED.
 - ALL WORK SHALL BE IN ACCORDANCE WITH THE PENINSULA TOWNSHIP PRIVATE ROAD STANDARDS AND SPECIFICATIONS.



GRAPHIC SCALE: 1" = 40'



ALL 2"-12" PVC WATER MAIN SHALL BE C-900 DR 14 (HIGH PRESSURE).
 ALL SANITARY SEWER SHALL BE PVC PIPE.
 MAINTAIN A MINIMUM OF 5 FEET OF COVER OVER ALL SANITARY SEWERS.

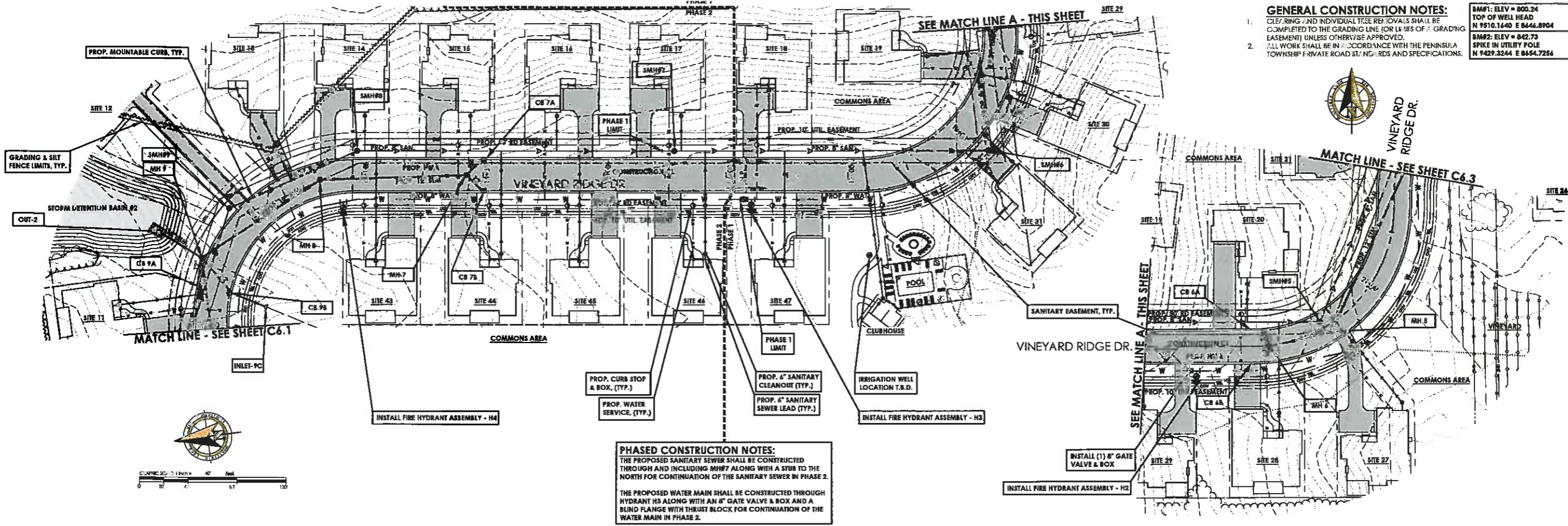
830 Conoverview Dr., Ste. 201
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 Traverse City, MI 49985
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 info@mansfield.com

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REV.	DATE	BY	CHK	DESCRIPTION
12	12/20/16	dm	cm	12-14: ph. imp. final easement
13	01/04/17	dm	cm	13-14: easements - final easement
14	02/02/17	dm	cm	14-15: easements - fence
15	04/14/17	dm	cm	15-16: add to see easements for 70' width
16	05/17/17	dm	cm	16-17: add to see easements for 70' width
17	07/13/17	dm	cm	17-18: add to see easements for 70' width
18	08/17/17	dm	cm	18-19: add to see easements for 70' width
19	09/05/17	dm	cm	19-20: add to see easements for 70' width

Ken Schmidt
 Vineyard Ridge
VINEYARD RIDGE DR. - PLAN & PROFILE: P.O.B. TO STA 11+00
 Section 36, Town 28 North, Range 11 West
 Peninsula Township, Grand Traverse County, Michigan

SCALE: 1"=40' H, 1"=4' V
CONSTRUCTION
 15119
C6.1



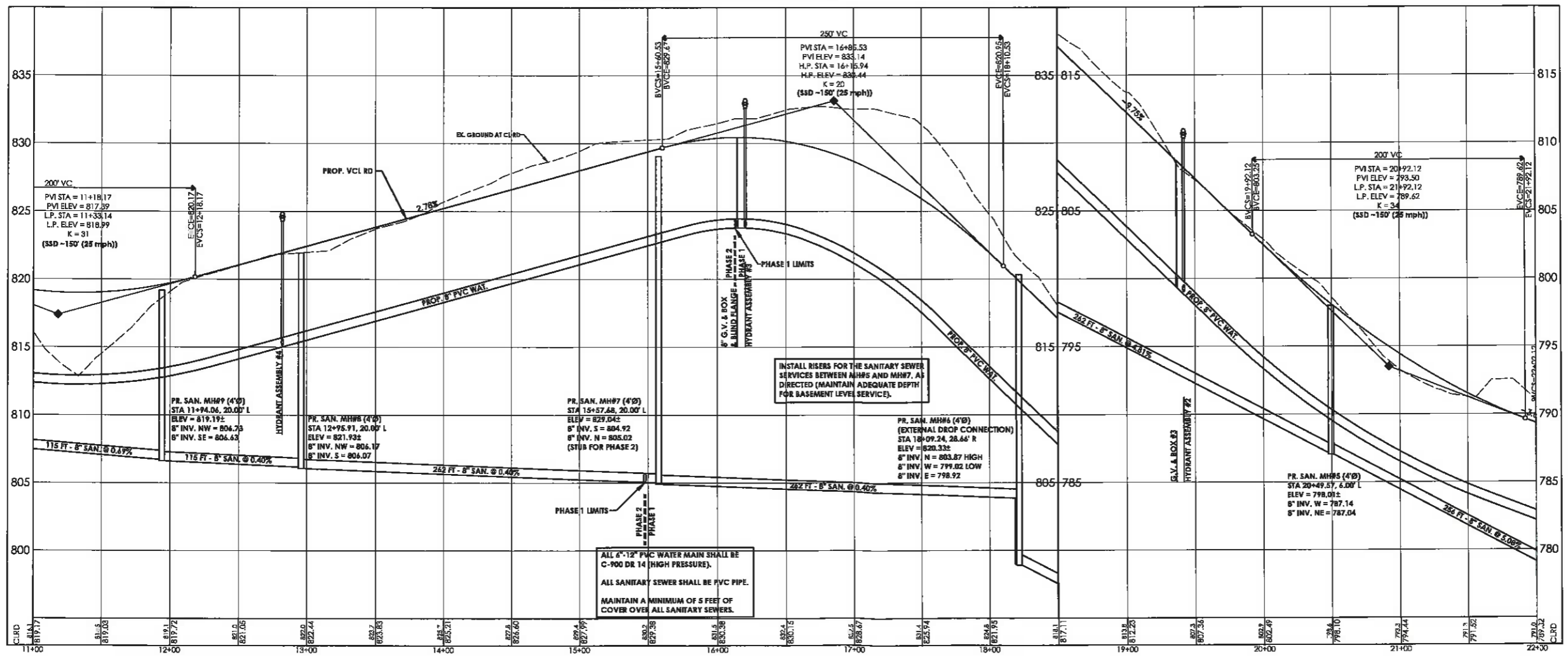
GENERAL CONSTRUCTION NOTES:
 1. CLEARING AND INDIVIDUAL TREE RELOCATIONS SHALL BE COMPLETED TO THE GRADING LINE (OR LIMITS OF EASEMENT) UNLESS OTHERWISE APPROVED.
 2. ALL WORK SHALL BE IN ACCORDANCE WITH THE PENINSULA TOWNSHIP PRIVATE ROAD STD. SPEC. AND SPECIFICATIONS.

BM#1: ELEV = 800.24
 TOP OF WELL HEAD
 N 9510.1640 E 8444.8904
 BM#2: ELEV = 842.73
 SPIKE IN UTILITY POLE
 N 9429.3244 E 8454.7256

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PHASED CONSTRUCTION NOTES:
 THE PROPOSED SANITARY SEWER SHALL BE CONSTRUCTED THROUGH AND INCLUDING MH#7 ALONG WITH A STUB TO THE NORTH FOR CONTINUATION OF THE SANITARY SEWER IN PHASE 2.
 THE PROPOSED WATER MAIN SHALL BE CONSTRUCTED THROUGH HYDRANT H3 ALONG WITH AN 8" GATE VALVE & BOX AND A BLIND FLANGE WITH THRUST BLOCK FOR CONTINUATION OF THE WATER MAIN IN PHASE 2.

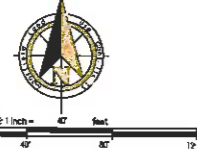
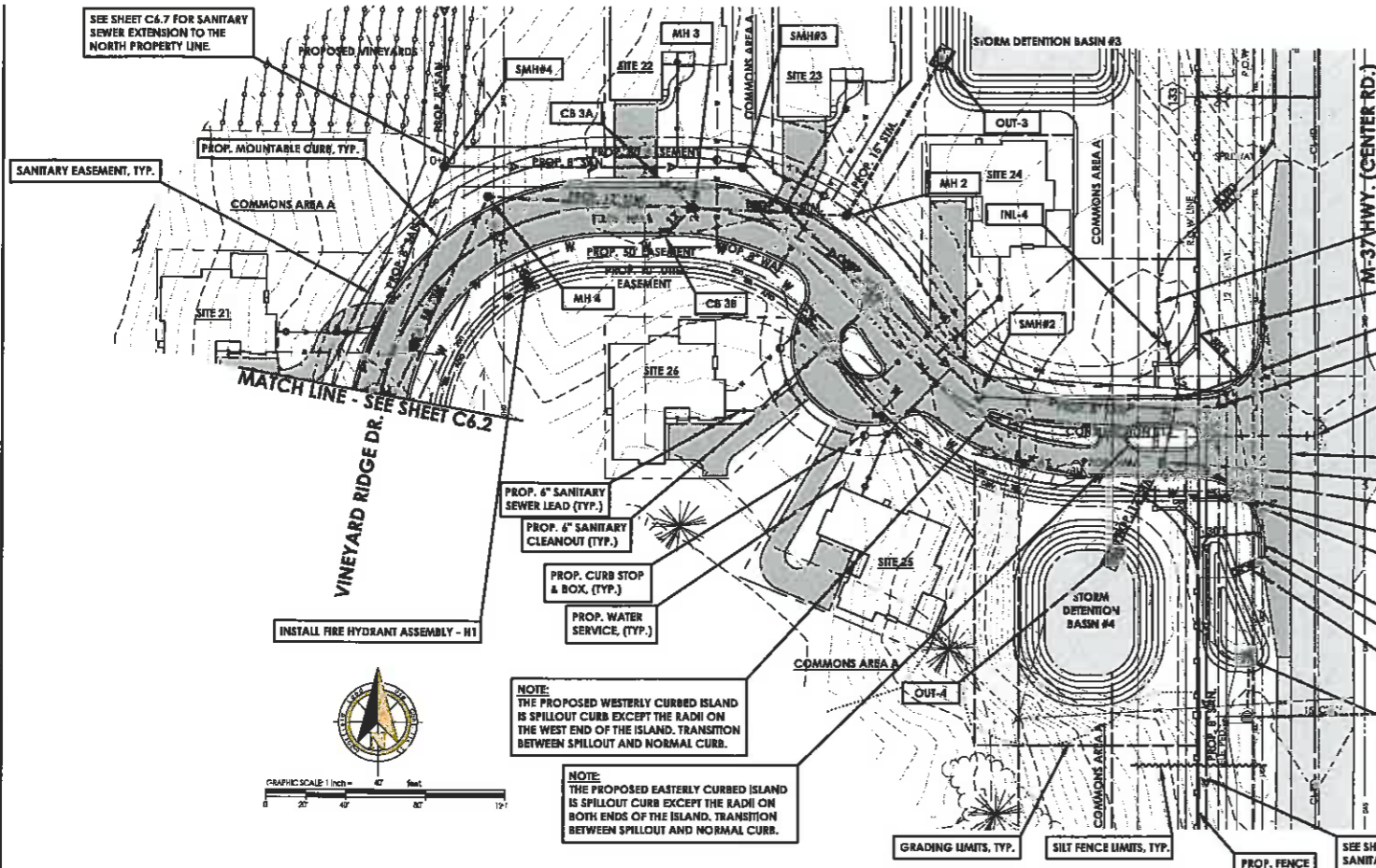


REV.	DATE	ISS.	BY	CHK.	DESC.
12	12-20-14	dm	mm	dm	Re: utility, 1st easement
13	01-04-17	dm	mm	dm	Re: utility easement
14	02-27-17	dm	mm	dm	Re: utility easement, fence
15	04-14-17	dm	mm	dm	Re: utility easement
16	04-28-17	dm	mm	dm	Re: utility easement
17	07-28-17	dm	mm	dm	Re: utility easement for driveway
18	08-11-17	dm	mm	dm	Re: utility easement for driveway
19	09-15-17	dm	mm	dm	Re: utility easement for driveway

Ken Schmidt
 Vineyard Ridge
VINEYARD RIDGE DR. - PLAN & PROFILE: STA 11+00 TO 22+00
 Section 36, Town 28 North, Range 11 West
 Peninsula Township, Grand Traverse County, Michigan

SCALE: 1"=40' H, 1"=40' V
 CONSTRUCTION
 15119
C6.2

SEE SHEET C6.7 FOR SANITARY SEWER EXTENSION TO THE NORTH PROPERTY LINE



NOTE:
THE PROPOSED WESTERLY CURBED ISLAND IS SPILLOUT CURB EXCEPT THE RADI ON THE WEST END OF THE ISLAND. TRANSITION BETWEEN SPILLOUT AND NORMAL CURB.

NOTE:
THE PROPOSED EASTERLY CURBED ISLAND IS SPILLOUT CURB EXCEPT THE RADI ON BOTH ENDS OF THE ISLAND. TRANSITION BETWEEN SPILLOUT AND NORMAL CURB.

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 - ALL WORK SHALL BE IN ACCORDANCE WITH THE PENINSULA TOWNSHIP PRIVATE ROAD STANDARDS AND SPECIFICATIONS.

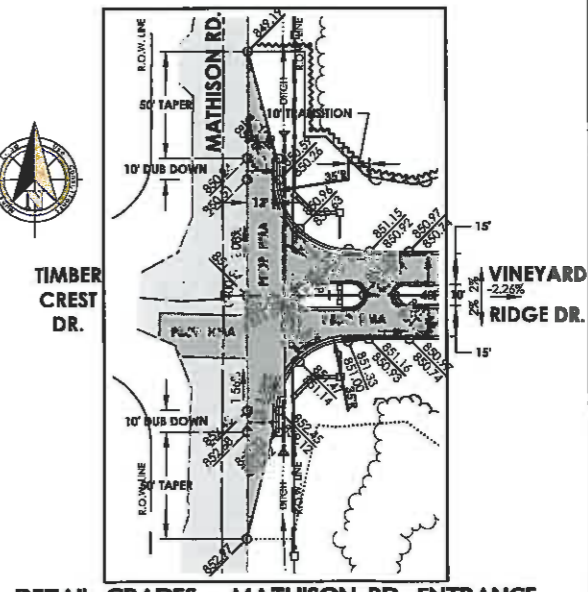
BM#1: ELEV = 800.24
TOP OF WELL HEAD
N 9510.1640 E 8846.8904

BM#2: ELEV = 842.73
SPIKE IN UTILITY POLE
N 9429.3244 E 8454.7256

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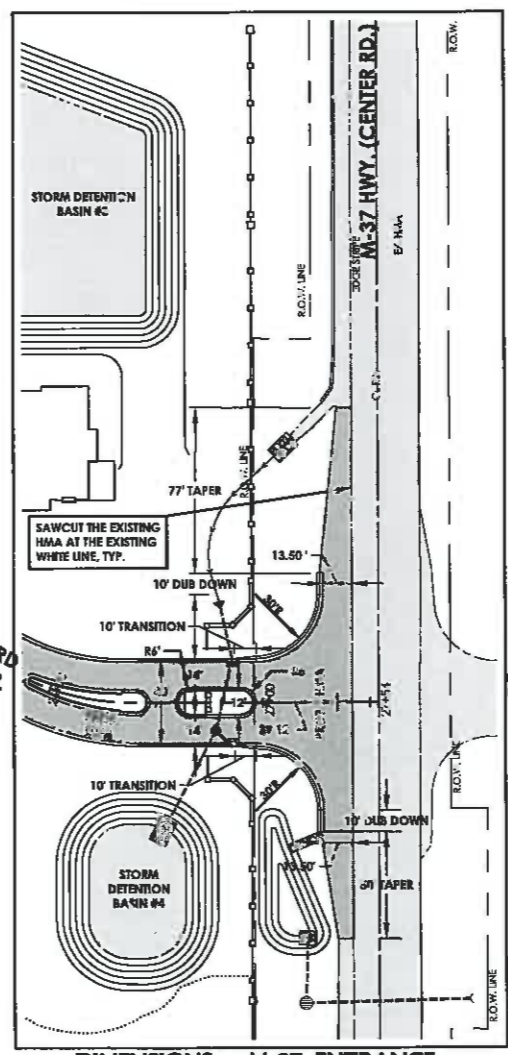
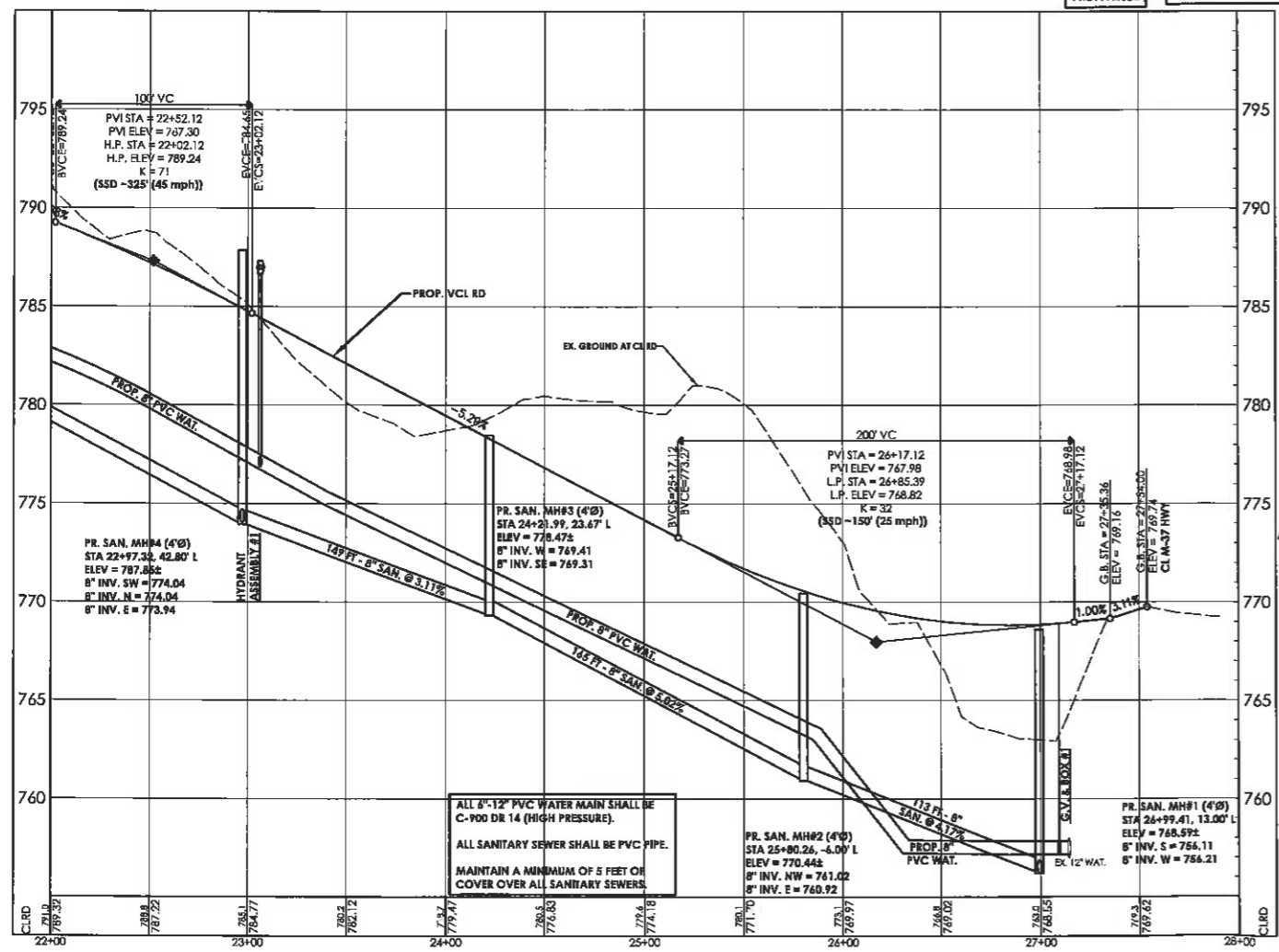
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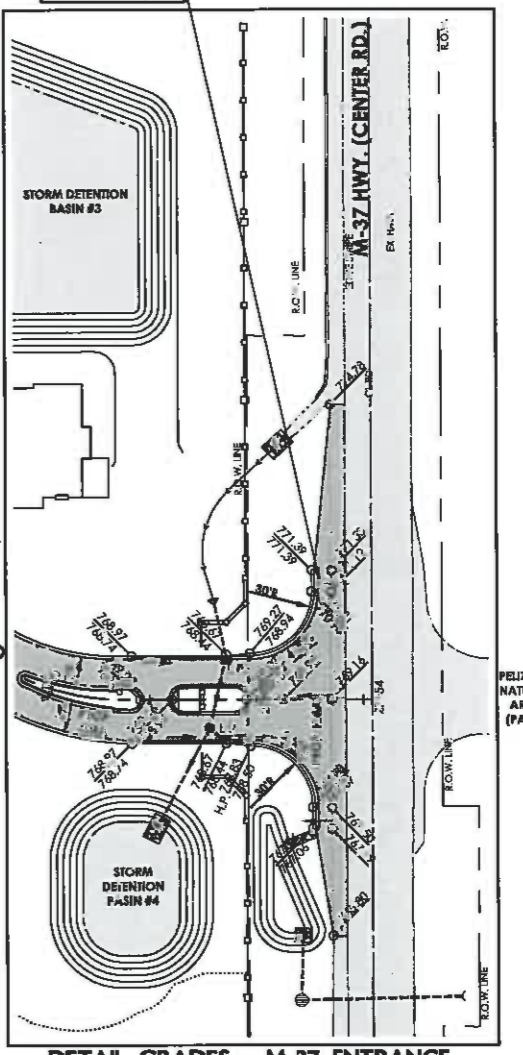


DETAIL GRADES - MATHISON RD. ENTRANCE
SCALE: 1" = 40'

MATCH THE EXISTING PAVED SHOULDER SLOPE FROM THE WHITE LINE TO THE PROPOSED CURB & GUTTER, TYP.



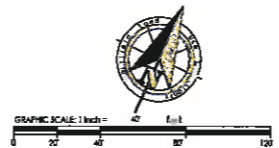
DIMENSIONS - M-37 ENTRANCE
SCALE: 1" = 40'



DETAIL GRADES - M-37 ENTRANCE
SCALE: 1" = 40'

REV	DATE	BY	CHK	DESCRIPTION
12	12/20/16	dm	mm	Rev. Loc. grading, lot easement
13	12/20/16	dm	mm	Rev. lot easement, turn-out curbs
14	12/20/16	dm	mm	Rev. lot easement, fence
15	12/20/16	dm	mm	Rev. lot easement, fence
16	12/20/16	dm	mm	Rev. lot easement, fence
17	12/20/16	dm	mm	Rev. lot easement, fence
18	12/20/16	dm	mm	Rev. lot easement, fence
19	12/20/16	dm	mm	Rev. lot easement, fence

Ken Schmidt
Vineyard Ridge
VINEYARD RIDGE DR. - PLAN & PROFILE: STA 22+00 TO P.O.E.
Section 36, Town 28 North, Range 11 West
Peninsula Township, Grand Traverse County, Michigan

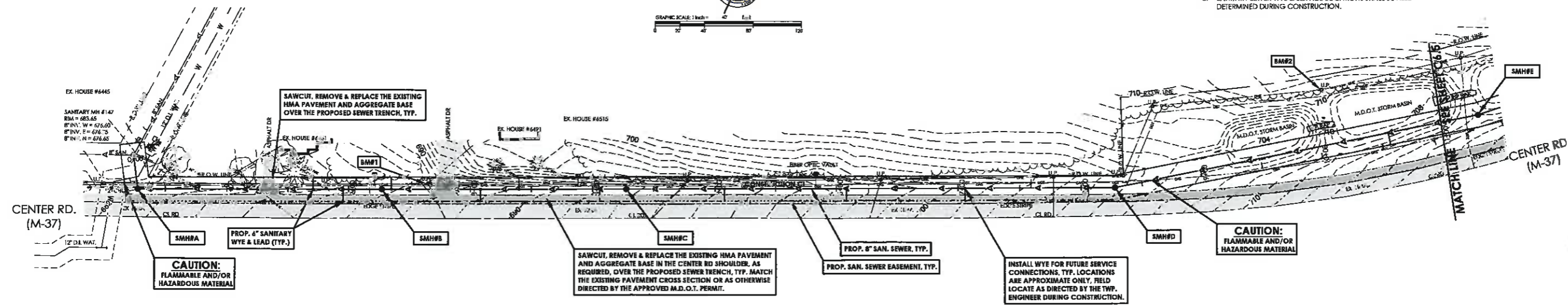


GENERAL CONSTRUCTION NOTES:

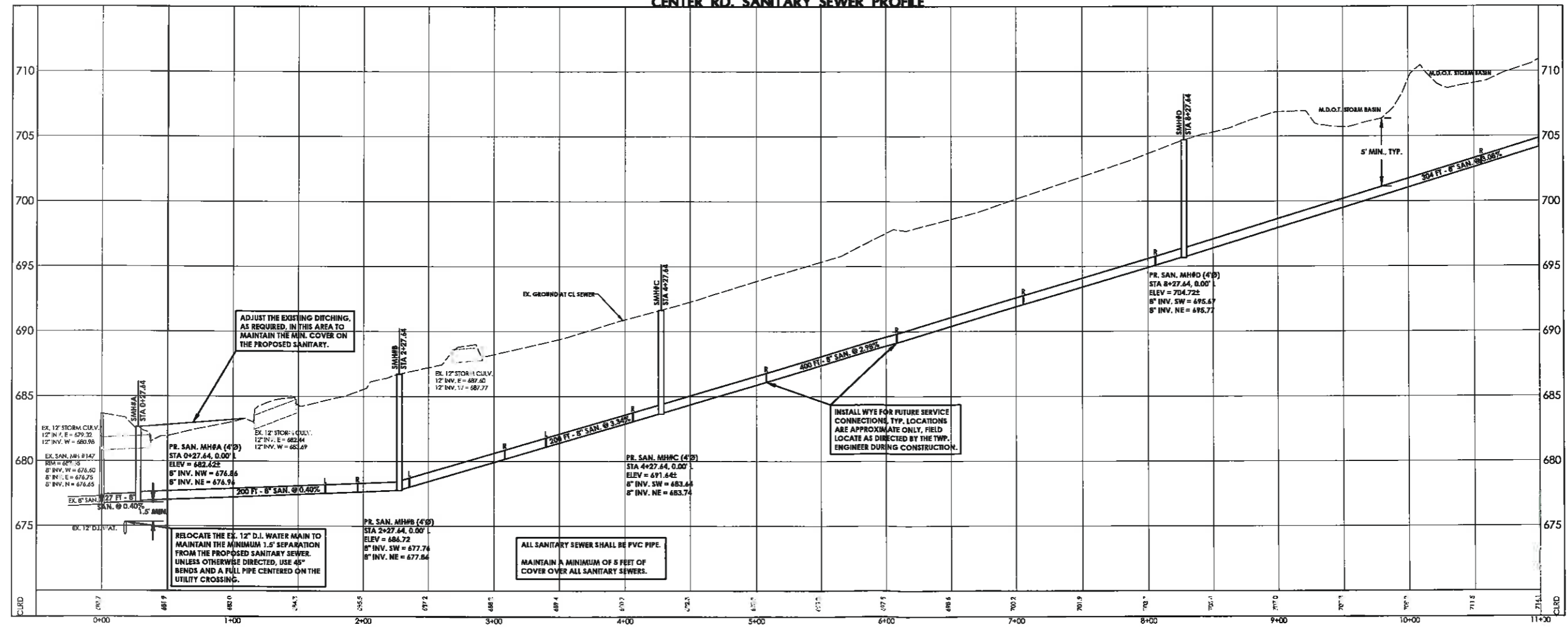
1. SANITARY SERVICE: ALL WORK ASSOCIATED WITH THE SANITARY MAIN AND SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT TWP. AND DPW STANDARD SPECIFICATIONS AND DETAILS.
2. COORDINATE WORK WITH THE TWP. AND DPW. PROVIDE 48 HOUR ADVANCED NOTICE PRIOR TO BEGINNING CONSTRUCTION.
3. SANITARY SEWER WYE & SERVICE LOCATIONS SHALL BE FIELD DETERMINED DURING CONSTRUCTION.

BM#1: ELEV = 663.91
 IR SPIKE IN UTILITY POLE
 N 6743.629' E 6355.657'

BM#2: ELEV = 712.11
 SPIKE IN UTILITY POLE
 N 7176.429' E 9465.459'



CENTER RD. SANITARY SEWER PROFILE



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REV.	DATE	BY	CHK	DESCRIPTION
12	12/20/16	dm	dm	Revised plan sheet, final submittal
13	01/24/17	dm	dm	Revised temporary turn-around
14	02/27/17	dm	dm	Revised easements, fences
15	04/14/17	dm	dm	Revised elevations, heights
16	04/24/17	dm	dm	Add 36" easement for Township
17	07/25/17	dm	dm	Locality, Contour, Plan & Permit Submittal
18	08/17/17	dm	dm	Township DOT Construction Plans & Permit Submittal
19	09/25/17	dm	dm	Township DOT Road Construction Plans & Permit Submittal

Ken Schmidt
 Vineyard Ridge
CENTER RD. SANITARY SEWER: P.O.B. TO STA 11+00
 Section 36, Town 28 North, Range 11 West
 Peninsula Township, Grand Traverse County, Michigan

SCALE: 1"=40' H, 1"=4' V

CONSTRUCTION

DATE: 2.3.16

15119

C6.4

GENERAL CONSTRUCTION NOTES:

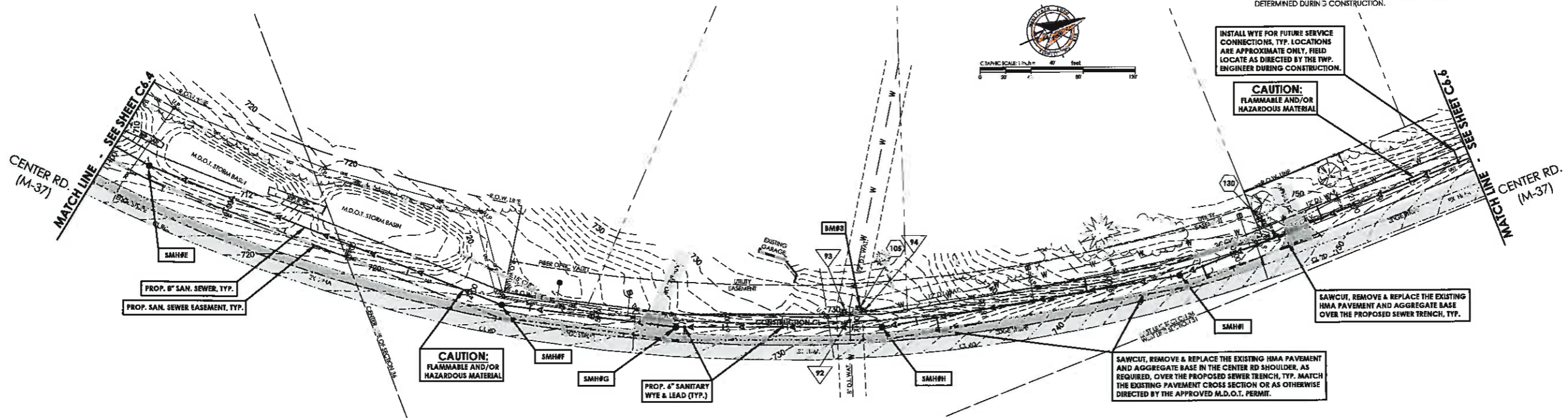
1. SANITARY SERVICE: ALL WORK ASSOCIATED WITH THE SANITARY MAIN AND SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT TWP. AND DPW STANDARD SPECIFICATIONS AND DETAILS.
2. COORDINATE WORK WITH THE TWP. AND DPW. PROVIDE 48 HOURS ADVANCED NOTICE PRIOR TO BEGINNING CONSTRUCTION.
3. SANITARY SEWER WYE & SERVICE LOCATIONS SHALL BE FIELD DETERMINED DURING CONSTRUCTION.

BM#2: ELEV = 712.11
SPIKE IN UTILITY POLE
N 7176.4298 E 9465.4599

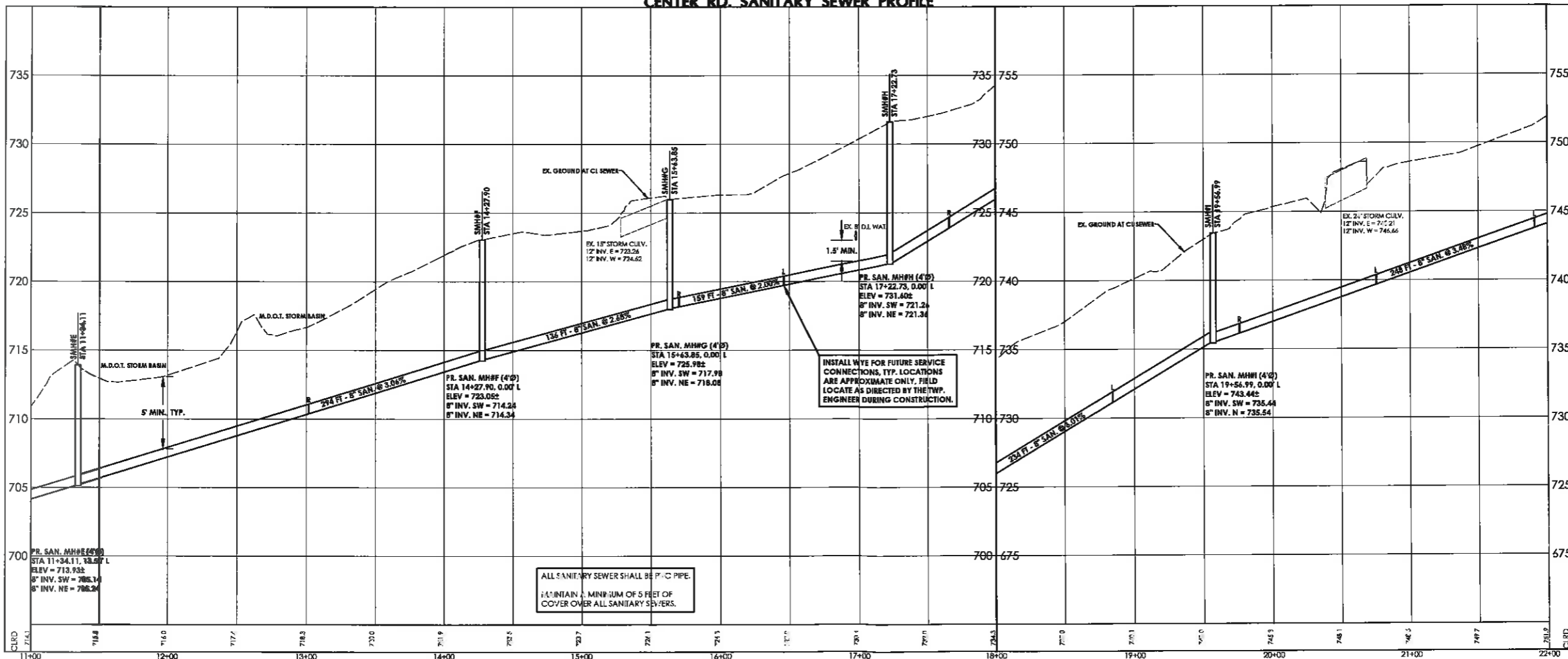
BM#3: ELEV = 734.16
TOP OF HYDRANT
N 7667.8578 E 9875.6043

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CENTER RD. SANITARY SEWER PROFILE



ALL SANITARY SEWER SHALL BE P.V.C. PIPE.
MAINTAIN A MINIMUM OF 5 FEET OF COVER OVER ALL SANITARY SEWERS.

REV.	DATE	BY	CHKD.	DESCRIPTION
12	12/20/16	mm	cm	Revised plan, 1st submittal
13	01/04/17	mm	cm	Revised plan, 2nd submittal
14	02/27/17	mm	cm	Revised plan, 3rd submittal
15	04/14/17	mm	cm	Revised plan, 4th submittal
16	04/28/17	mm	cm	Revised plan, 5th submittal
17	07/20/17	mm	cm	Revised plan, 6th submittal
18	08/11/17	mm	cm	Revised plan, 7th submittal
19	09/05/17	mm	cm	Revised plan, 8th submittal

Ken Schmidt
Vineyard Ridge
CENTER RD. SANITARY SEWER: STA 11+00 TO STA 22+00
Section 36, Town 28 North, Range 11 West
Peninsula Township, Grand Traverse County, Michigan

SCALE: 1"=40' H, 1"=4' V

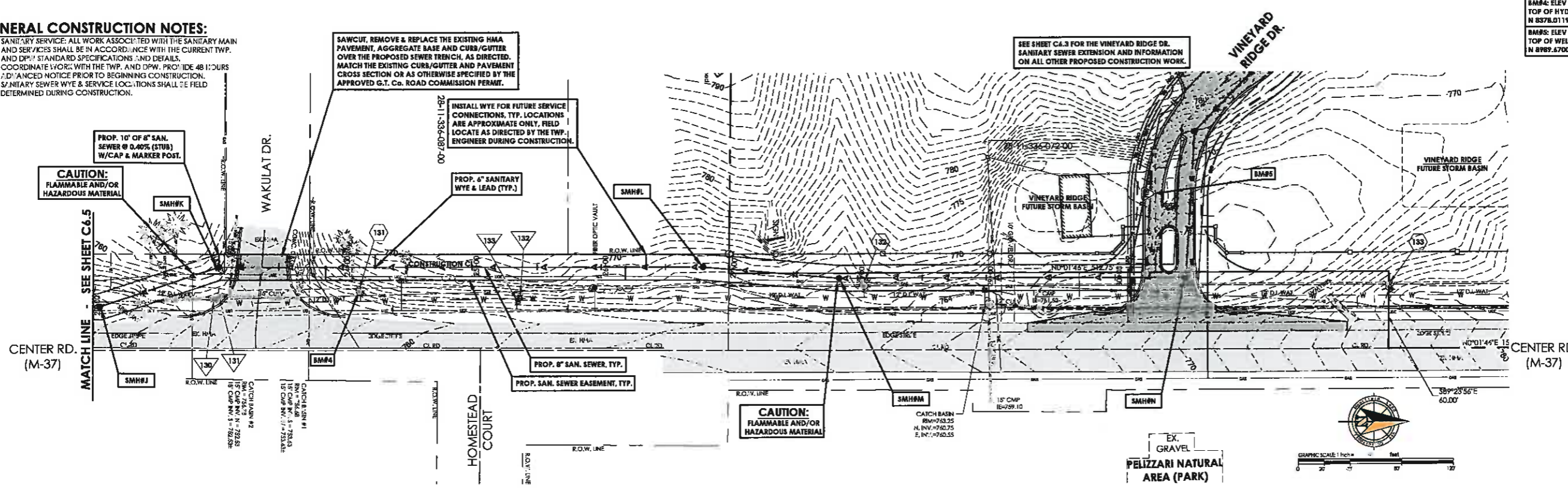
CONSTRUCTION

15119

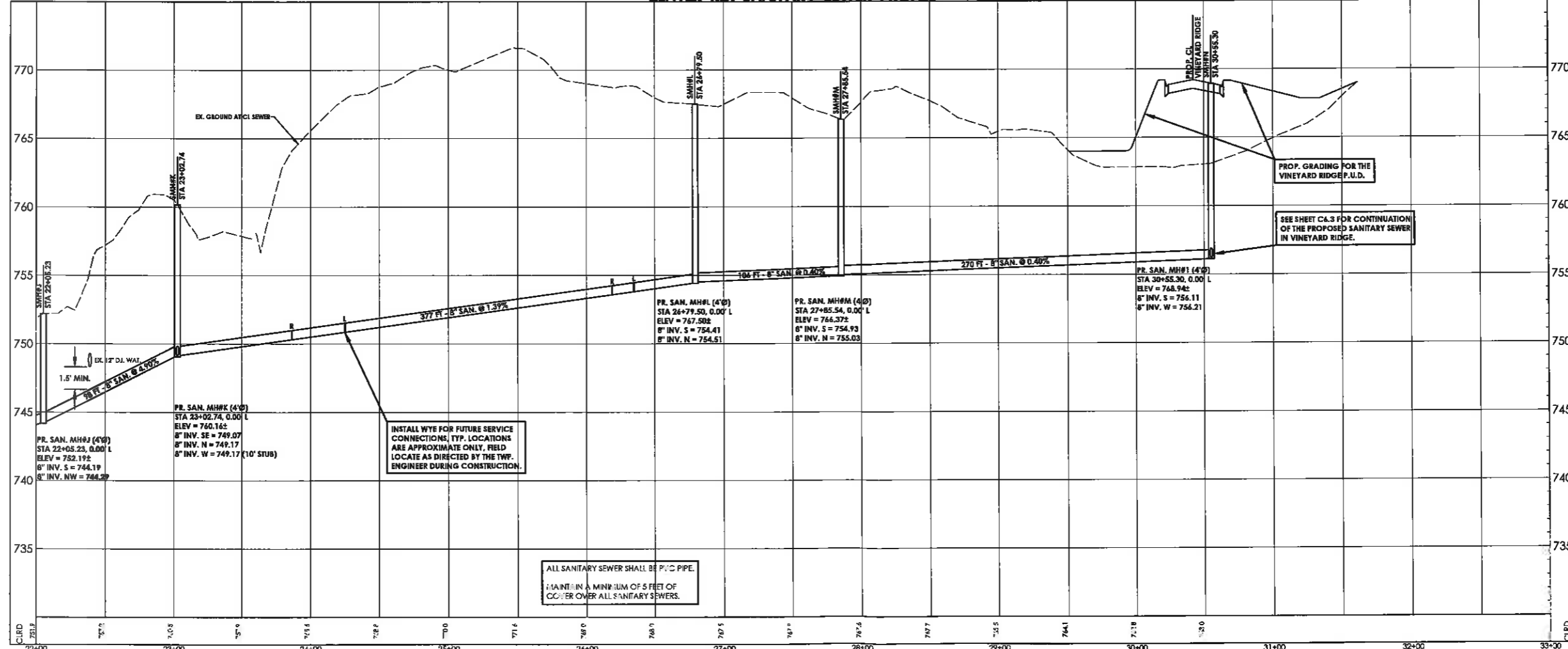
C6.5

GENERAL CONSTRUCTION NOTES:

- SANITARY SERVICE: ALL WORK ASSOCIATED WITH THE SANITARY MAIN AND SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT TWP. AND DPW STANDARD SPECIFICATIONS AND DETAILS.
- COORDINATE WORK WITH THE TWP. AND DPW. PROVIDE 48 HOURS ADVANCED NOTICE PRIOR TO BEGINNING CONSTRUCTION.
- SANITARY SEWER WYE & SERVICE LOCATIONS SHALL BE FIELD DETERMINED DURING CONSTRUCTION.



CENTER RD. SANITARY SEWER PROFILE



B.M.#4: ELEV = 745.35
TOP OF HYDRANT
N 8878.0119 E 9951.4983

B.M.#5: ELEV = 770.35
TOP OF WELL HEAD
N 8897.6700 E 9878.2245

830 Cottageview Dr., Ste. 201
P.O. Box 4015
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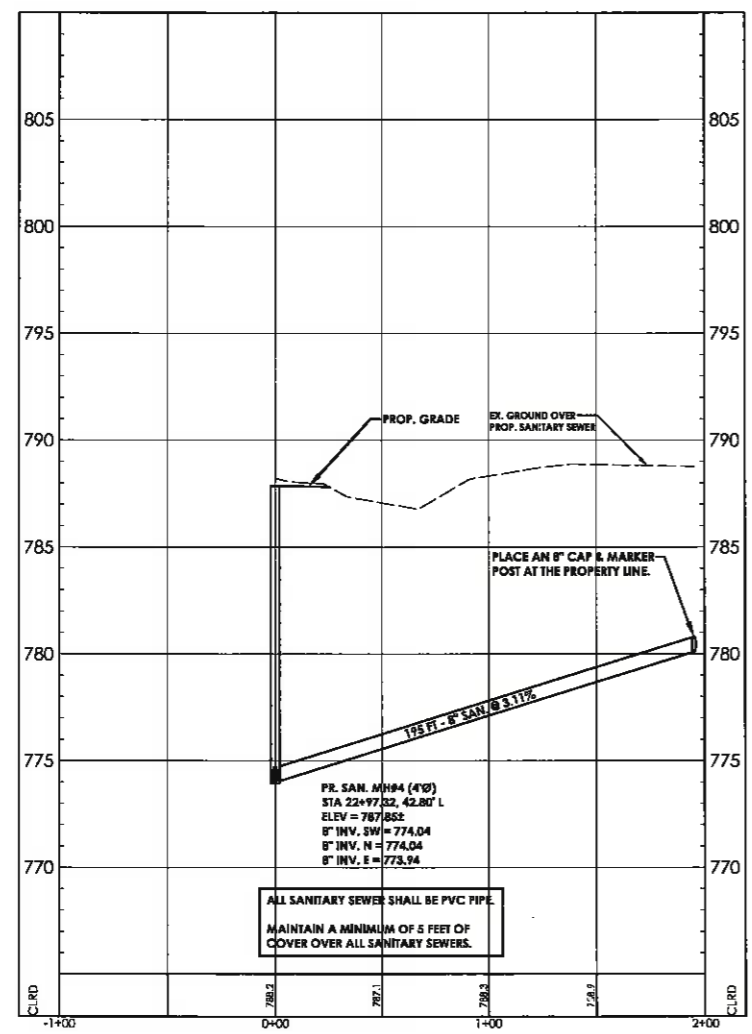
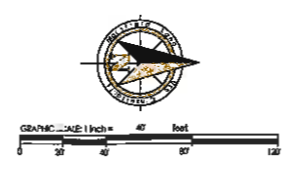
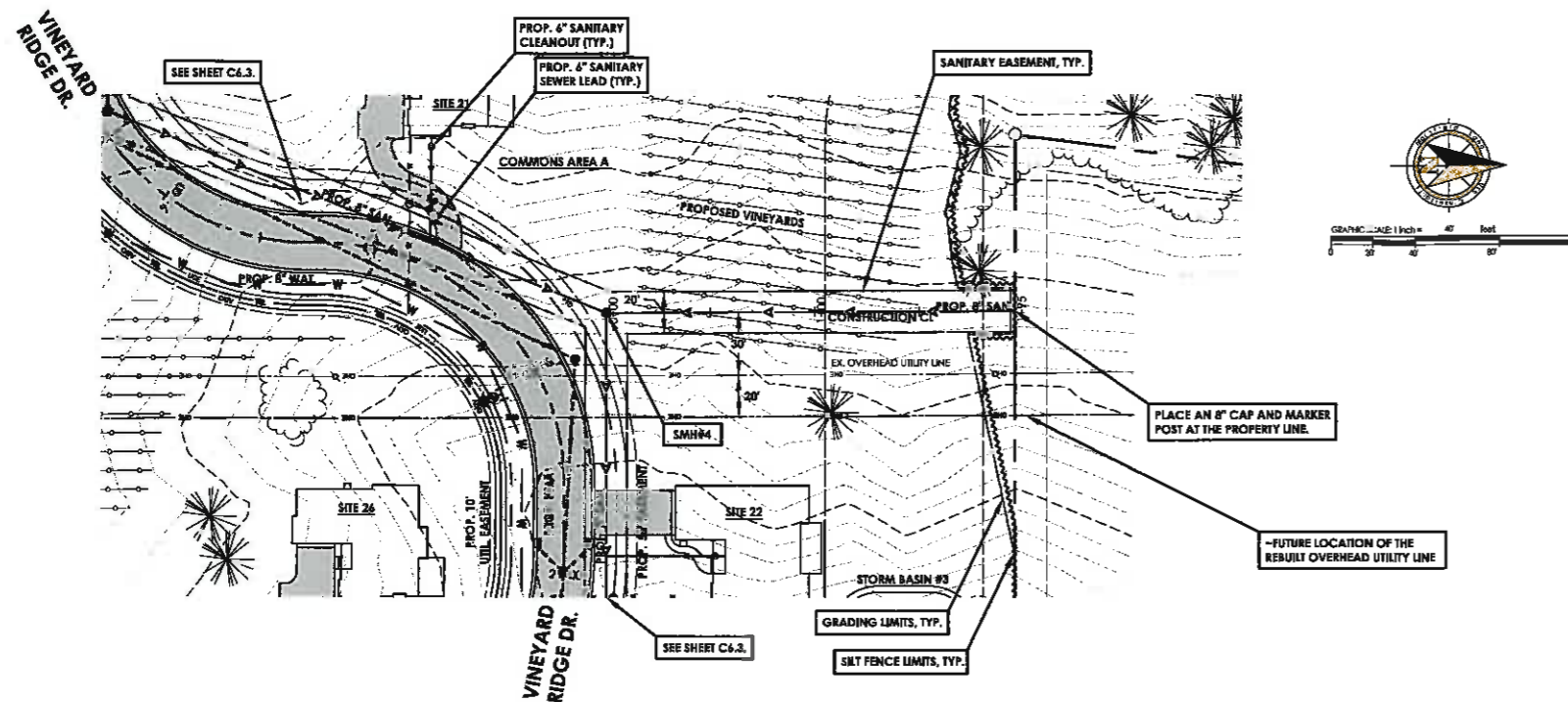
Ken Schmidt
Vineyard Ridge
CENTER RD. SANITARY SEWER: STA 22+00 TO P.O.E.
Section 36, Town 28 North, Range 11 West
Peninsula Township, Grand Traverse County, Michigan

Scale: 1"=40' H, 1"=4' V

CONSTRUCTION

15119

C6.6



- GENERAL CONSTRUCTION NOTES:**
- CLEARING AND INDIVIDUAL TREE REMOVALS SHALL BE COMPLETED TO THE GRADING LINE (OR LIMITS OF A GRADING EASEMENT) UNLESS OTHERWISE APPROVED.
 - ALL WORK SHALL BE IN ACCORDANCE WITH THE PENINSULA TOWNSHIP PRIVATE ROAD STANDARDS AND SPECIFICATIONS.

BM#1: ELEV = 800.24
TOP OF WELL HEAD
N 9510.1440 E 8644.8704

BM#2: ELEV = 842.73
SPIKE IN UTILITY POLE
N 9429.2244 E 8654.7256

830 Cottageville Dr., Ste. 201
Traverse City, MI 49685
Phone: 231-946-9210
www.mansfield.com
info@mansfield.com

Mansfield
Land Use Consultants

NO.	DATE	DESCRIPTION
12	12-20-16	Revised for planning, not submitted
13	01-04-17	Revised for final construction
14	02-27-17	Revised for easement & fences
15	04-14-17	Revised wall height
16	04-14-17	Add sewer easements for 12' width
17	07-12-17	Final Construction Plans & Permit Submittal
18	08-17-17	Permit Submittal
19	09-05-17	Final Construction Plans & Permit Submittal

Ken Schmidt
Vineyard Ridge
PLAN & PROFILE: SAN. MH#4 TO NORTH PROPERTY LINE
Section 36, Town 28 North, Range 11 West
Peninsula Township, Grand Traverse County, Michigan

SCALE: 1"=40' H, 1"=4' V

CONSTRUCTION

15119

C6.7