CONTRACT DRAWINGS

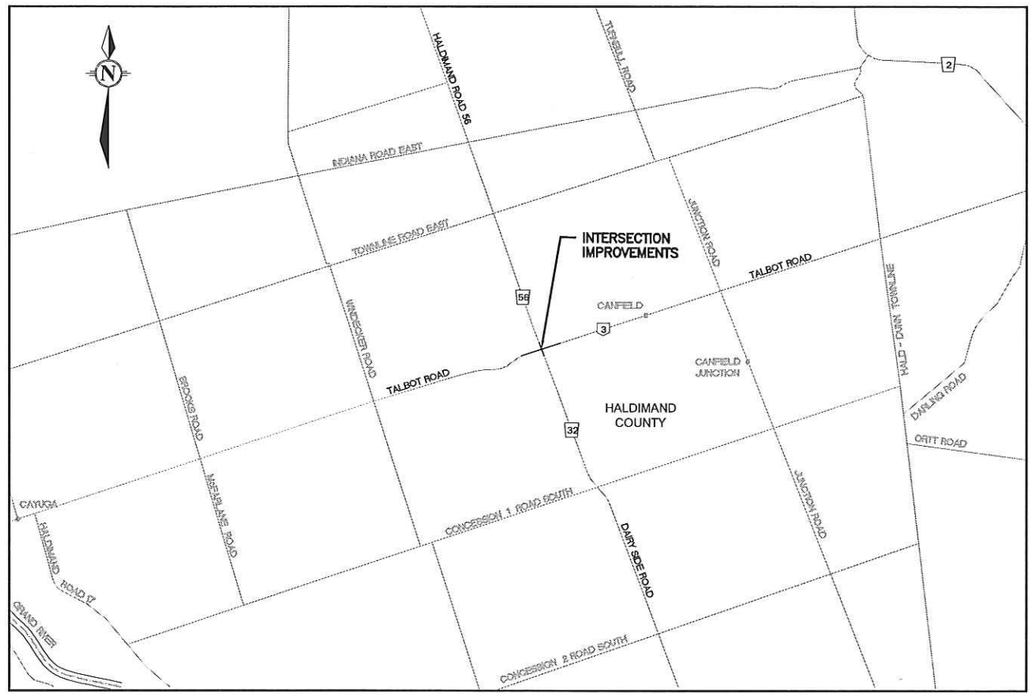
CONTRACT NO. 2019-3006

BOOK 1 OF 1

WEST REGION

Ministry Of Transportation

Ontario



Key Plan

2.5km 0 5.0km

WP No 3056-10-00 Contract No 2019-3006

Work of GRADING, DRAINAGE, GRANULAR BASE, HOT MIX PAVING, AND ELECTRICAL

Hwy No 3 Region WEST

Location INTERSECTION AT HALDIMAND ROAD 56

Length 0.58 km.

Reference Plans

Mar. 5. 2019 — Date
D. Bauh P. Eng.
FOR Manager, Engineering

MARCH 5, 2019 — Date
P. Eng.
Regional Director

Ministry of Transportation

Ontario

INDEX

W.P. No. 3056-10-00

Contract No. 2019-3006

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HORIZONTAL CONTROL
HIGHWAY 3

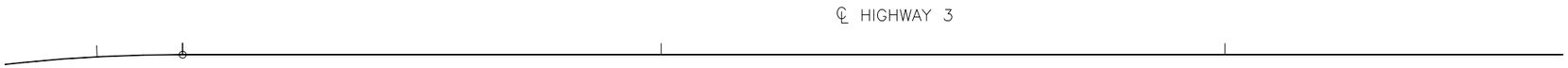
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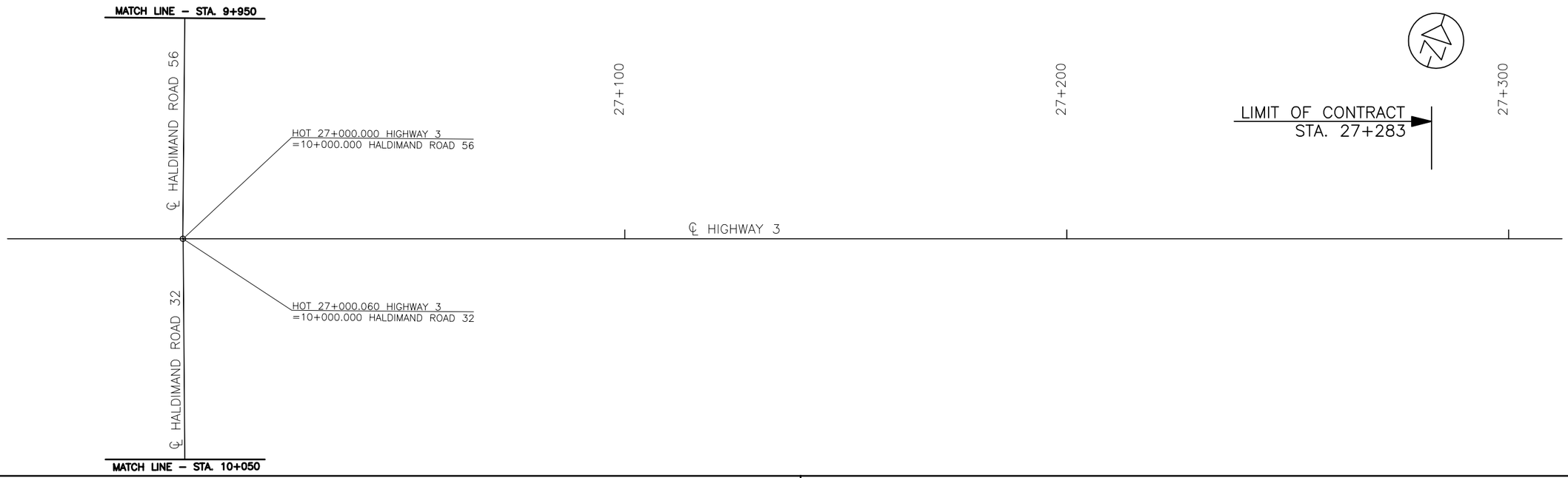
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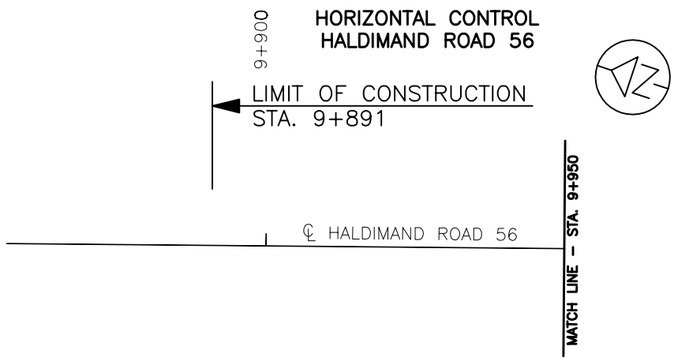
ALIGNMENT
STA 26+705 TO STA 27+283
Survey _____ Revised _____

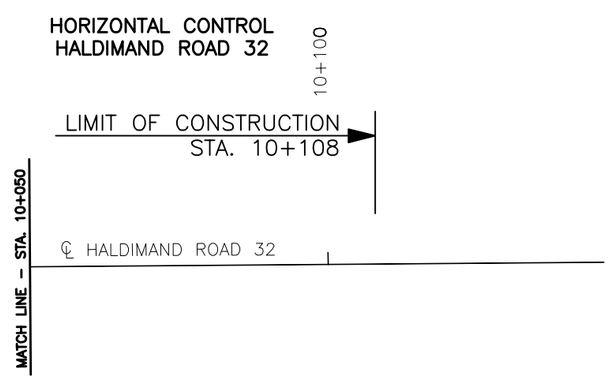
SHEET 1

wsp









SCALE
5m 0 10m
Horizontal

LICENSED PROFESSIONAL ENGINEER
A. J. CRAGG
100123262
27-Feb-2019
PROVINCE OF ONTARIO

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

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LAST UPDATED: Feb 27, 2019 – 11:36
PRINTED: Mar 8, 2019 – 11:39

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PLATE No
CONT 2019-3006
WP 3056-10-00

ALIGNMENT DATA
STA TO STA
Survey _____ Revised _____

SHEET 2

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 86-05

Alignment Name: Highway 3
Alignment Description:
Alignment Style: Default

	Station	Northing	Easting
Element: Linear			
POB ( )	25+212.344	4758525.4019	281197.7547
PI ( )	25+640.754	4758643.8994	281609.4510
Tangential Direction:		N 73°56'33.83" E	
Tangential Length:	428.410		
Element: Linear			
PI ( )	25+640.754	4758643.8994	281609.4510
BC ( )	25+902.188	4758716.9845	281860.4610
Tangential Direction:		N 73°45'58.80" E	
Tangential Length:	261.434		
Element: Circular			
BC ( )	25+902.188	4758716.9845	281860.4610
PI ( )	25+948.878	4758730.0371	281905.2898
CC ( )		4758297.7612	281982.5238
EC ( )	25+995.215	4758733.3155	281951.8649
Radius:	436.632		
Delta:		12°12'26.02"	Right
Degree of Curvature (Arc):		13°07'19.97"	
Length:	93.027		
Tangent:	46.690		
Chord:	92.851		
Middle Ordinate:	2.475		
External:	2.489		
Tangent Direction:		N 73°45'58.80" E	
Radial Direction:		S 16°14'01.20" E	
Chord Direction:		N 79°52'11.81" E	
Radial Direction:		S 4°01'35.18" E	
Tangent Direction:		N 85°58'24.82" E	
Element: Linear			
EC ( )	25+995.215	4758733.3155	281951.8649
BC ( )	26+318.983	4758756.0495	282274.8340
Tangential Direction:		N 85°58'24.83" E	
Tangential Length:	323.768		
Element: Circular			
BC ( )	26+318.983	4758756.0495	282274.8340
PI ( )	26+422.471	4758763.3160	282378.0660
CC ( )		4759046.3591	282254.3990
EC ( )	26+517.842	4758834.1270	282453.5342
Radius:	291.028		
Delta:		39°09'00.07"	Left
Degree of Curvature (Arc):		19°41'14.56"	
Length:	198.858		
Tangent:	103.487		
Chord:	195.012		
Middle Ordinate:	16.820		
External:	17.852		
Tangent Direction:		N 85°58'24.83" E	
Radial Direction:		S 4°01'35.17" E	
Chord Direction:		N 66°23'54.80" E	
Radial Direction:		S 43°10'35.24" E	
Tangent Direction:		N 46°49'24.76" E	
Element: Linear			
EC ( )	26+517.842	4758834.1270	282453.5342
BC ( )	26+587.783	4758881.9844	282504.5388
Tangential Direction:		N 46°49'24.05" E	
Tangential Length:	69.941		
Element: Circular			
BC ( )	26+587.783	4758881.9844	282504.5388
PI ( )	26+652.512	4758926.2750	282551.7420
CC ( )		4758669.7530	282703.6747
EC ( )	26+715.167	4758946.3826	282613.2683
Radius:	291.028		
Delta:		25°04'42.77"	Right
Degree of Curvature (Arc):		19°41'14.56"	
Length:	127.384		
Tangent:	64.729		
Chord:	126.369		
Middle Ordinate:	6.942		
External:	7.111		
Tangent Direction:		N 46°49'24.05" E	
Radial Direction:		S 43°10'35.95" E	
Chord Direction:		N 59°21'45.44" E	
Radial Direction:		S 18°05'53.18" E	
Tangent Direction:		N 71°54'06.82" E	
Element: Linear			
EC ( )	26+715.167	4758946.3826	282613.2683
PI ( )	27+333.708	4759138.5293	283201.2077
Tangential Direction:		N 71°54'06.82" E	
Tangential Length:	618.541		
Element: Linear			
PI ( )	27+333.708	4759138.5293	283201.2077
PI ( )	28+039.618	4759354.4066	283873.2987
Tangential Direction:		N 72°11'34.28" E	
Tangential Length:	705.910		
Element: Linear			
PI ( )	28+039.618	4759354.4066	283873.2987
PI ( )	28+766.523	4759571.6940	84566.9670
Tangential Direction:		N 72°36'25.74" E	
Tangential Length:	726.904		
Element: Linear			
PI ( )	28+766.523	4759571.6940	284566.9670
POE ( )	29+580.674	4759810.3588	285345.3507
Tangential Direction:		N 72°57'13.05" E	
Tangential Length:	814.151		

LICENSED PROFESSIONAL ENGINEER
A. J. CAGG
100123362
27 FEB 2019
PROVINCE OF ONTARIO

Alignment Name: Haldimand Rd. 32
Alignment Description:
Alignment Style: Default

	Station	Northing	Easting
Element: Linear			
POB ( )	10+000.000	4759034.8831	282884.0669
POE ( )	10+312.697	4758738.4283	282983.5366
Tangential Direction:		S 18°32'53.43" E	
Tangential Length:	312.697		

Alignment Name: Haldimand Rd. 56
Alignment Description:
Alignment Style: Default

	Station	Northing	Easting
Element: Linear			
POB ( )	9+679.952	4759339.9618	282787.3346
POE ( )	10+000.000	4759034.8640	282884.0090
Tangential Direction:		S 17°34'53.43" E	
Tangential Length:	320.048		

SCALE
N.T.S.

METRIC

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ALIGNMENT DATA
STA TO STA
Survey _____ Revised _____

SHEET 3

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 86-05

TWP
HWY 3
WO/WP GWP 3056-10-00
DESC HIGHWAY 3 CL
CONSULTANT NAME MMM GROUP LTD.

FROM STATION 25+212.334
TO STATION 29+580.674
ZONE MTM 10
COORDINATE SYSTEM NAD83
PREPARED FOR THE MINISTRY OF TRANSPORTATION

GRID DISTANCE CSF 0.9999
SURVEY DATE 01/05/2012
DATE REVISED
CONTRACT NO.

Point No	Point ID	Chainage	Northing	Easting	Elevation	Distance	Offset	Description
902	SIB	26+605.377	4758884.921	282524.957			11.319	
600	HCM	26+653.087	4758929.442	282551.803			-9.810	HCM 00819980044
903	SIB	26+712.799	4758933.104	282615.230			13.222	
112	HCP	26+762.880	4758954.162	282660.922		47.713	7.409	HCP 112
312	BM 193.180	26+762.880	4758954.162	282660.922	193.180		7.409	19mm x 2.0m ROUND IRON BAR
								26+762.880 7.409 RT HWY 3 CL
100	HCP	26+986.802	4759039.952	282868.462		223.922	-9.665	HCP 100
300	BM 191.894	26+986.802	4759039.952	282868.462	191.894		-9.665	19mm x 2.0m ROUND IRON BAR
								26+986.802 9.665 LT HWY 3 CL
900	CM	26+987.354	4759052.703	282864.875		0.551	-22.900	
	HOT	27+000.000	4759034.864	282884.009		12.646		HOT = 10+000.000 CR 56 CL
	HOT	27+000.060	4759034.883	282884.067		0.061		HOT = 10+000.000 CR 32 CL
901	SIB	27+050.409	4759062.920	282927.873		50.348	-13.041	
101	HCP	27+226.414	4759096.498	283102.065		176.005	9.154	HCP 101
301	BM 192.411	27+226.414	4759096.498	283102.065	192.411		9.154	19mm x 2.0m ROUND IRON BAR
								27+226.414 9.154 RT HWY 3 CL

TWP
HWY 3
WO/WP GWP 3056-10-00
DESC HALDIMAND Rd. 56 CL
CONSULTANT NAME MMM GROUP LTD.

FROM STATION 9+651.012
TO STATION 10+000.000
ZONE MTM 10
COORDINATE SYSTEM NAD83
PREPARED FOR THE MINISTRY OF TRANSPORTATION

GRID DISTANCE CSF 0.9999
SURVEY DATE 01/05/2012
DATE REVISED
CONTRACT NO.

Point No	Point ID	Chainage	Northing	Easting	Elevation	Distance	Offset	Description
	HOT	9+651.012	4759367.550	282778.593				
603	HCM	9+664.897	4759352.467	282776.960		13.885	6.113	HCM 00819930701
904	SIB	9+950.148	4759086.364	282881.502		285.251	-13.166	
900	CM	9+977.215	4759052.703	282864.875		27.066	12.852	
100	HCP	9+990.453	4759039.952	282868.462		13.239	13.284	HCP 100
300	BM 191.894	9+990.453	4759039.952	282868.462	191.894		13.284	19mm x 2.0m ROUND IRON BAR 9+990.453 13.284 RT CR 56 CL
	HOT	10+000.000	4759034.864	282884.009				HOT = 27+000.000 HWY 3 CL

TWP
HWY 3
WO/WP GWP 3056-10-00
DESC HALDIMAND RD. 32 CL
CONSULTANT NAME MMM GROUP LTD.

FROM STATION 10+000.000
TO STATION 10+312.697
ZONE MTM 10
COORDINATE SYSTEM NAD83
PREPARED FOR THE MINISTRY OF TRANSPORTATION

GRID DISTANCE CSF 0.9999
SURVEY DATE 01/05/2012
DATE REVISED
CONTRACT NO.

Point No	Point ID	Chainage	Northing	Easting	Elevation	Distance	Offset	Description
	HOT	10+000.000	4759034.883	282884.067				HOT = 27+000.060 HWY 3 CL
905	IB	10+169.172	4758877.691	282947.396		169.172	-10.036	
602	HCM	10+184.680	4758857.778	282936.800		15.508	6.344	HCM 00819930700
	HOT	10+312.697	4758738.428	282983.537		128.017		

SCALE
N.T.S.

METRIC

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CULVERT STAGING
CULVERT 6
Survey _____ Revised _____

SHEET 4

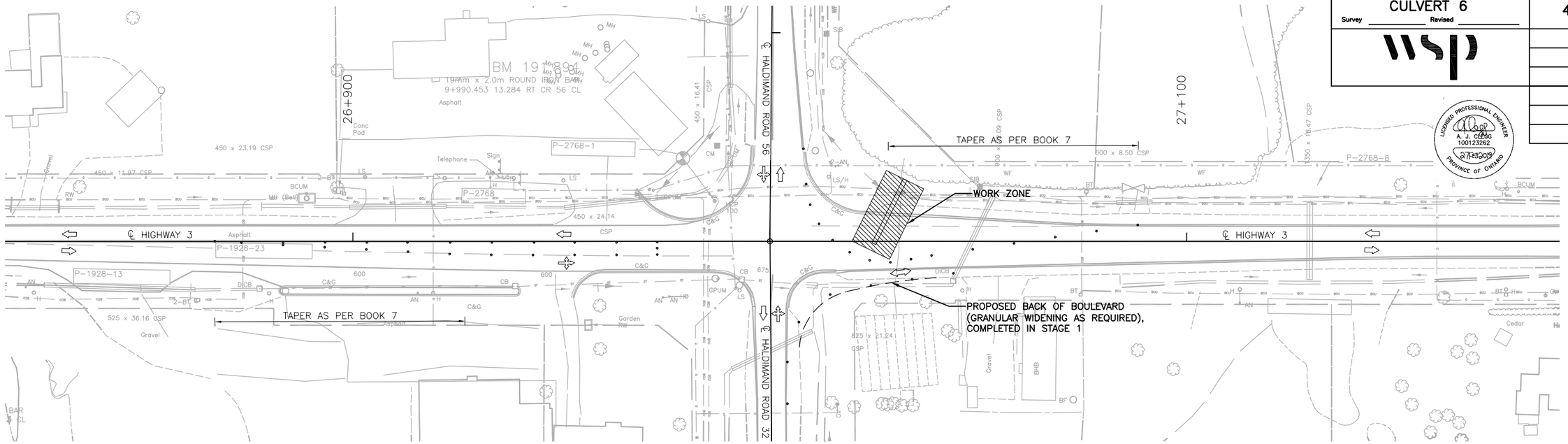
MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

SUPPLEMENTAL LEGEND

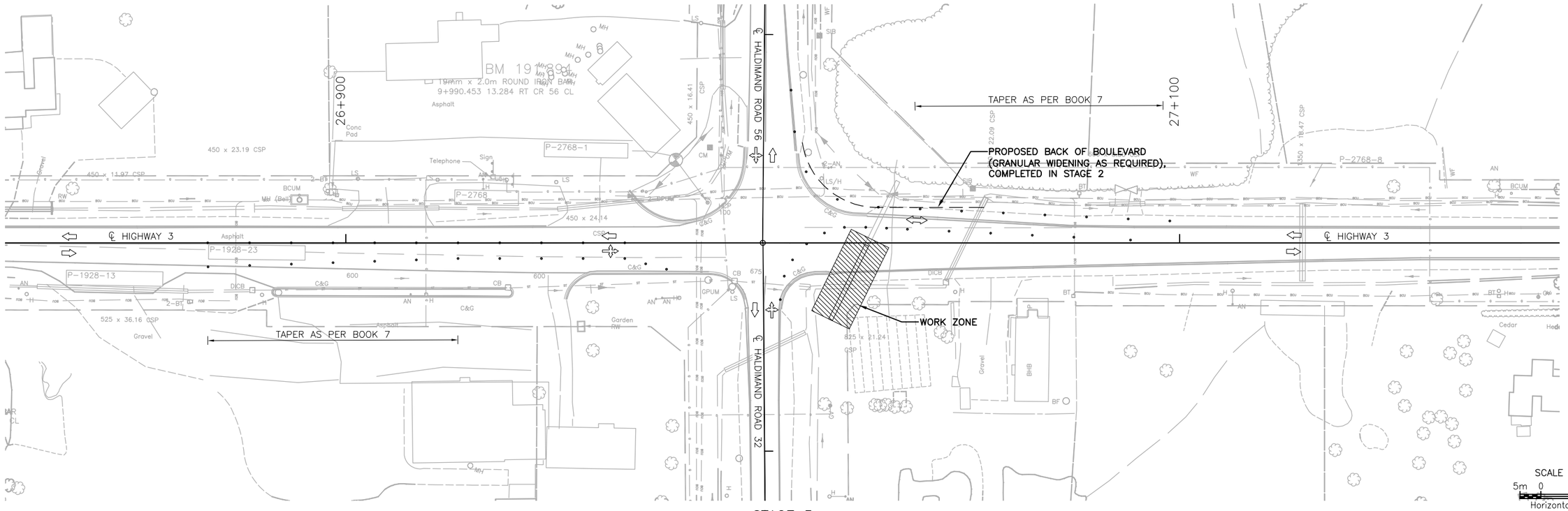
- TC-54 (NOTE 2)
- DIRECTION OF TRAVEL

NOTES:

1. ALL LANE CLOSURES TO BE IN ACCORDANCE WITH ONTARIO TRAFFIC MANUAL (OTM) BOOK 7.
2. TC-54'S SPACING TO BE IN ACCORDANCE WITH OTM BOOK 7.
3. ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED.



STAGE 2



STAGE 3

SCALE
5m 0 10m
Horizontal

METRIC

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WP 3056-10-00

SHEET 5

CULVERT STAGING SECTIONS

Survey _____ Revised _____

wsp



MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

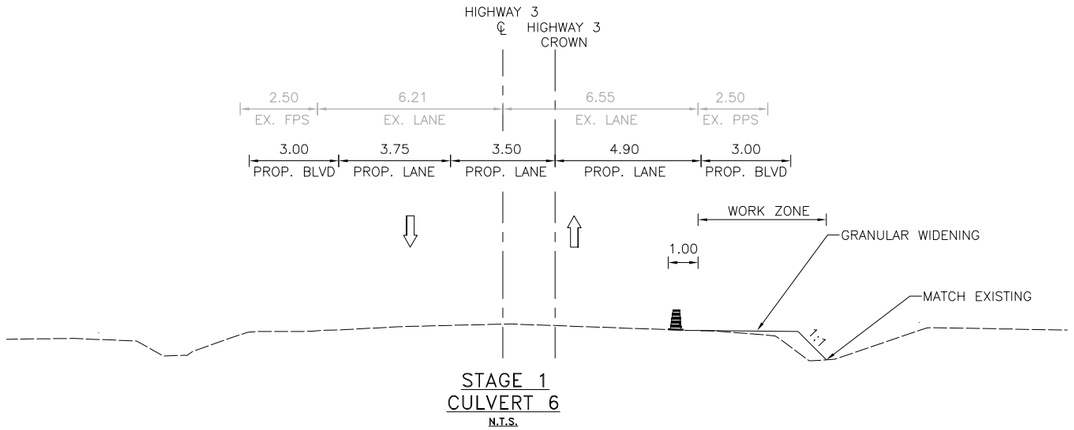
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TC-54 (NOTE 2)

DIRECTION OF TRAVEL

NOTES:

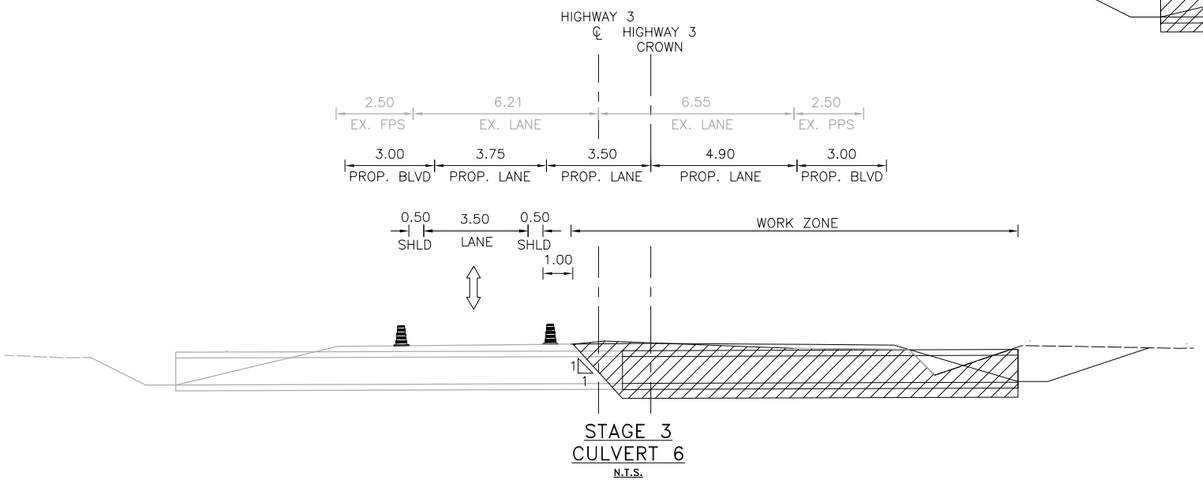
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2. TC-54'S SPACING TO BE IN ACCORDANCE WITH OTM BOOK 7.
3. ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED.



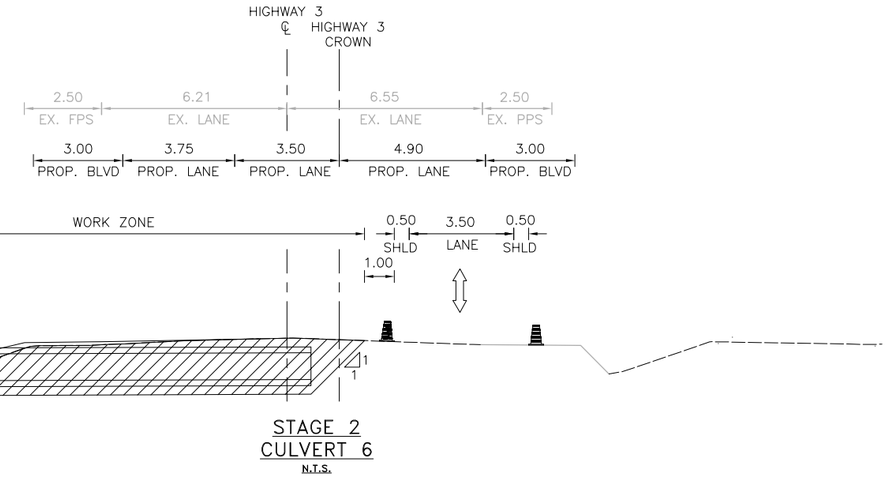
STAGE 1
CULVERT 6
N.T.S.

CONSTRUCTION SEQUENCE: STAGE 1	
TRAFFIC	CONSTRUCTION
THE FOLLOWING TRAFFIC CONSTRAINTS APPLY AS SPECIFIED ELSEWHERE WITHIN THE CONTRACT DOCUMENTS: • HIGHWAY 3 TRAFFIC MAINTAINED IN BOTH DIRECTIONS. • ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED AT ALL TIMES.	• WIDEN HIGHWAY 3 SOUTH SIDE TO TOP OF EXISTING GRANULAR PROFILE. • MAINTAIN EXISTING ROADSIDE AND CULVERT DRAINAGE.

CONSTRUCTION SEQUENCE: STAGE 2	
TRAFFIC	CONSTRUCTION
THE FOLLOWING TRAFFIC CONSTRAINTS APPLY AS SPECIFIED ELSEWHERE WITHIN THE CONTRACT DOCUMENTS: • HIGHWAY 3 TRAFFIC REDUCED TO A SINGLE LANE ON THE SOUTH SIDE. • ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED AT ALL TIMES.	• CONSTRUCT NORTH SIDE CULVERT. • COMPLETE NORTH SIDE ROAD WIDENING AND GRADE RAISE TO TOP OF GRANULAR PROFILE. • MAINTAIN EXISTING ROADSIDE AND CULVERT DRAINAGE.



STAGE 3
CULVERT 6
N.T.S.



STAGE 2
CULVERT 6
N.T.S.

CONSTRUCTION SEQUENCE: STAGE 3	
TRAFFIC	CONSTRUCTION
THE FOLLOWING TRAFFIC CONSTRAINTS APPLY AS SPECIFIED ELSEWHERE WITHIN THE CONTRACT DOCUMENTS: • HIGHWAY 3 TRAFFIC REDUCED TO A SINGLE LANE ON THE NORTH SIDE. • ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED AT ALL TIMES.	• CONSTRUCT SOUTH SIDE CULVERT. • COMPLETE SOUTH SIDE ROAD WIDENING AND GRADE RAISE TO TOP OF GRANULAR PROFILE. • DRAINAGE TO BE CONVEYED THROUGH NEW CULVERT.

SCALE
N.T.S.

METRIC

PLATE No
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CULVERT STAGING
CULVERT 12

Survey _____ Revised _____

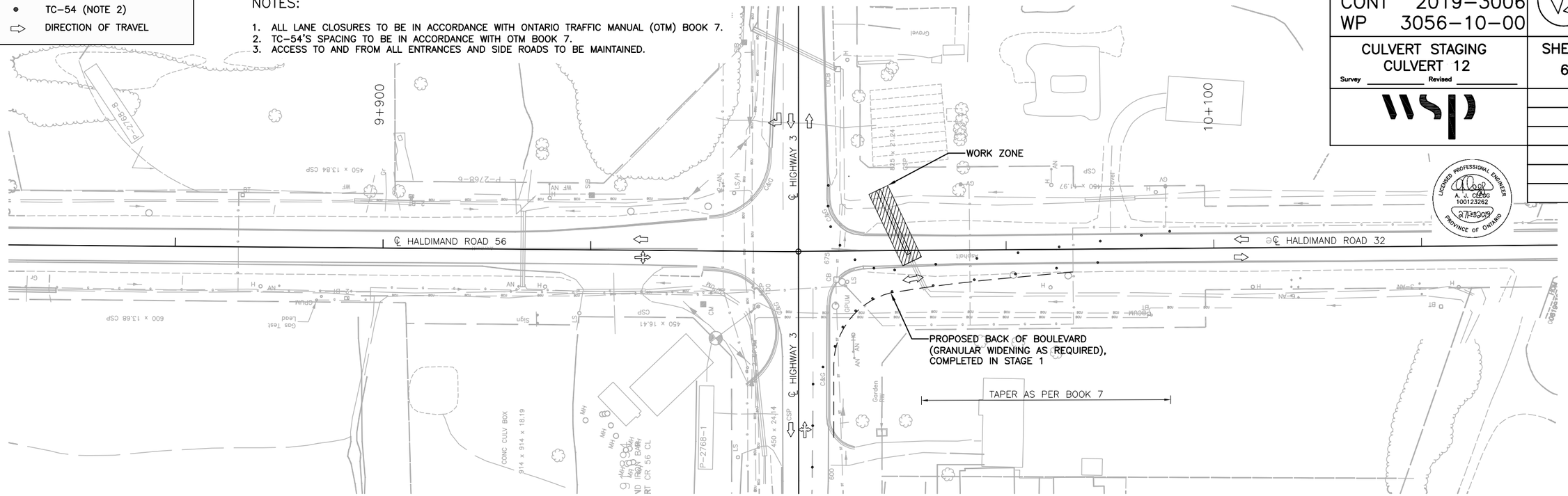
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SUPPLEMENTAL LEGEND

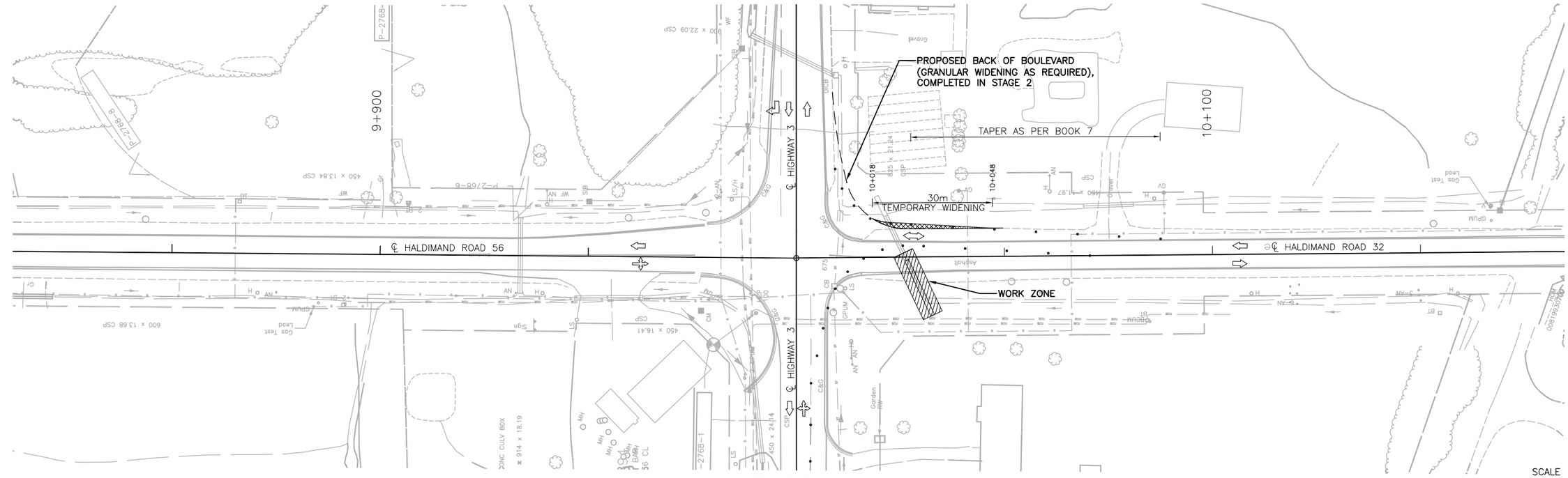
- TC-54 (NOTE 2)
- DIRECTION OF TRAVEL

NOTES:

1. ALL LANE CLOSURES TO BE IN ACCORDANCE WITH ONTARIO TRAFFIC MANUAL (OTM) BOOK 7.
2. TC-54'S SPACING TO BE IN ACCORDANCE WITH OTM BOOK 7.
3. ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED.



STAGE 2



STAGE 3

SCALE
5m 0 10m
Horizontal

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

METRIC

PLATE No
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SHEET 7

CULVERT STAGING SECTIONS

Survey _____ Revised _____

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

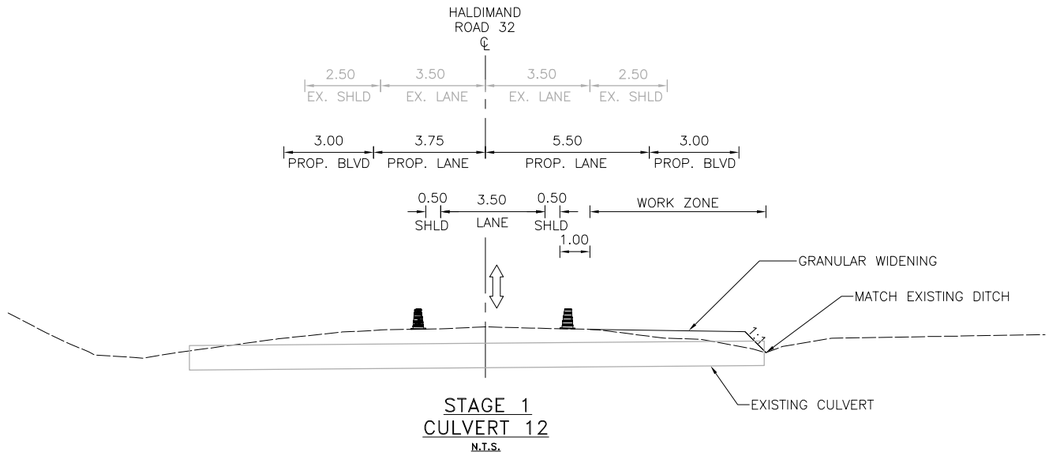
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TC-54 (NOTE 2)

DIRECTION OF TRAVEL

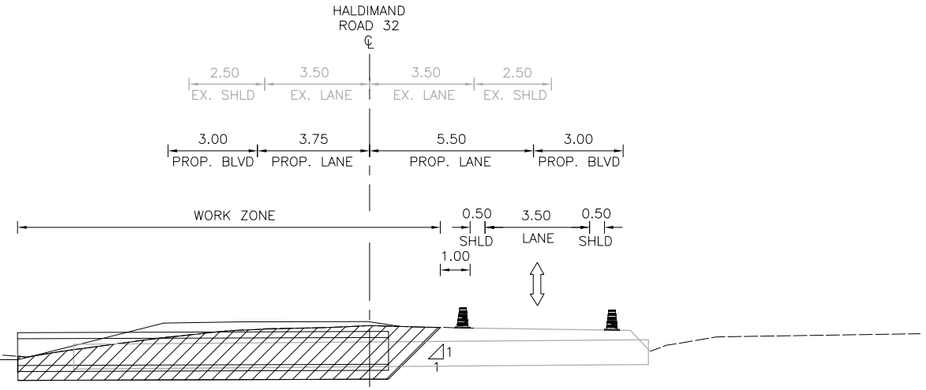
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2. TC-54'S SPACING TO BE IN ACCORDANCE WITH OTM BOOK 7.
3. ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED.



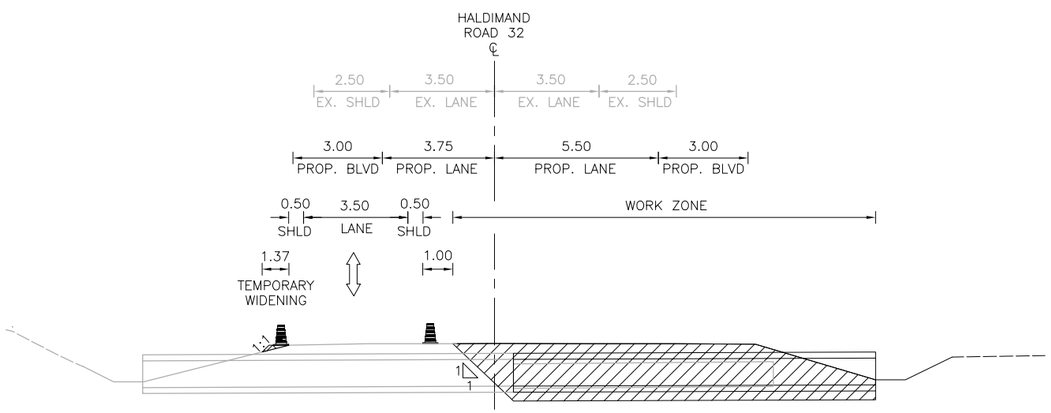
STAGE 1
CULVERT 12
N.T.S.

CONSTRUCTION SEQUENCE: STAGE 1	
TRAFFIC	CONSTRUCTION
THE FOLLOWING TRAFFIC CONSTRAINTS APPLY AS SPECIFIED ELSEWHERE WITHIN THE CONTRACT DOCUMENTS: • HALDIMAND ROAD 32 TRAFFIC REDUCED TO A SINGLE LANE. • ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED AT ALL TIMES.	• WIDEN HALDIMAND ROAD 32 WEST SIDE TO TOP OF EXISTING GRANULAR PROFILE. • MAINTAIN EXISTING ROADSIDE AND CULVERT DRAINAGE.



STAGE 2
CULVERT 12
N.T.S.

CONSTRUCTION SEQUENCE: STAGE 2	
TRAFFIC	CONSTRUCTION
THE FOLLOWING TRAFFIC CONSTRAINTS APPLY AS SPECIFIED ELSEWHERE WITHIN THE CONTRACT DOCUMENTS: • HALDIMAND ROAD 32 TRAFFIC REDUCED TO A SINGLE LANE ON THE WEST SIDE. • ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED AT ALL TIMES.	• CONSTRUCT EAST SIDE CULVERT. • COMPLETE EAST SIDE ROAD WIDENING AND GRADE RAISE TO TOP OF GRANULAR PROFILE. COMPLETE TEMPORARY WIDENING FOR STAGE 3. • MAINTAIN EXISTING ROADSIDE AND CULVERT DRAINAGE.



STAGE 3
CULVERT 12
N.T.S.

CONSTRUCTION SEQUENCE: STAGE 3	
TRAFFIC	CONSTRUCTION
THE FOLLOWING TRAFFIC CONSTRAINTS APPLY AS SPECIFIED ELSEWHERE WITHIN THE CONTRACT DOCUMENTS: • HALDIMAND ROAD 32 TRAFFIC REDUCED TO A SINGLE LANE ON THE EAST SIDE. • ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED AT ALL TIMES.	• CONSTRUCT WEST SIDE CULVERT. • COMPLETE WEST SIDE ROAD WIDENING AND GRADE RAISE TO TOP OF GRANULAR PROFILE. • DRAINAGE TO BE REINSTATED THROUGH NEW CULVERT.

SCALE
N.T.S.

METRIC

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SHEET 8

CULVERT STAGING
CULVERT 8

Survey _____ Revised _____

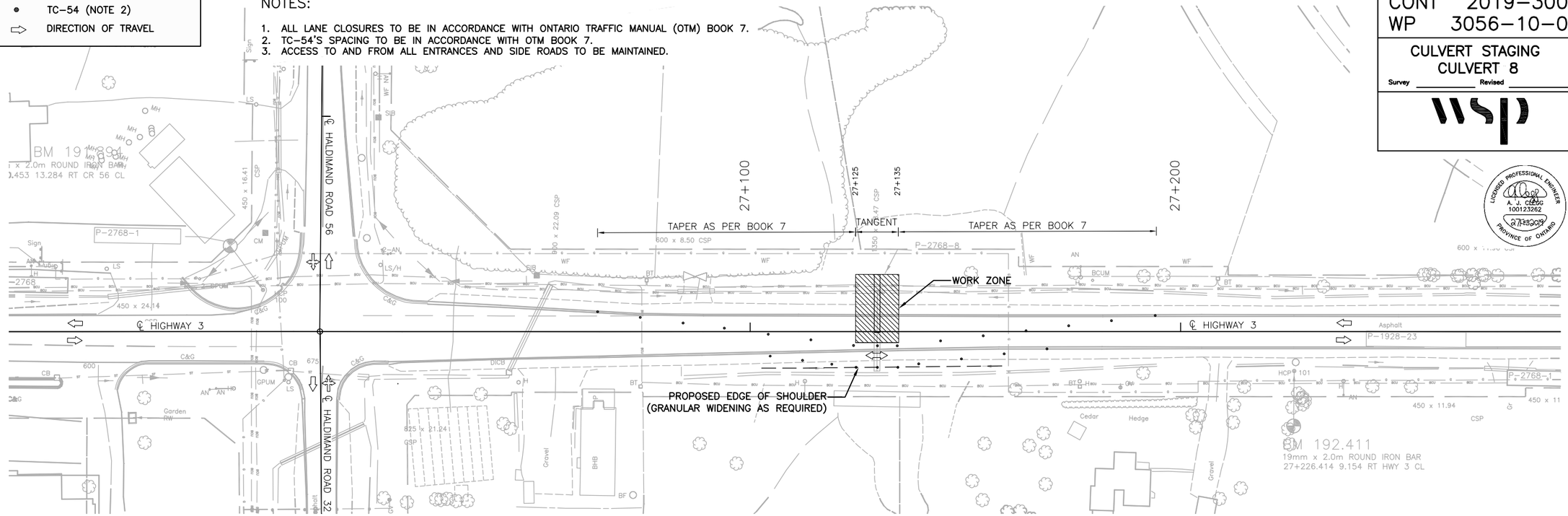
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SUPPLEMENTAL LEGEND

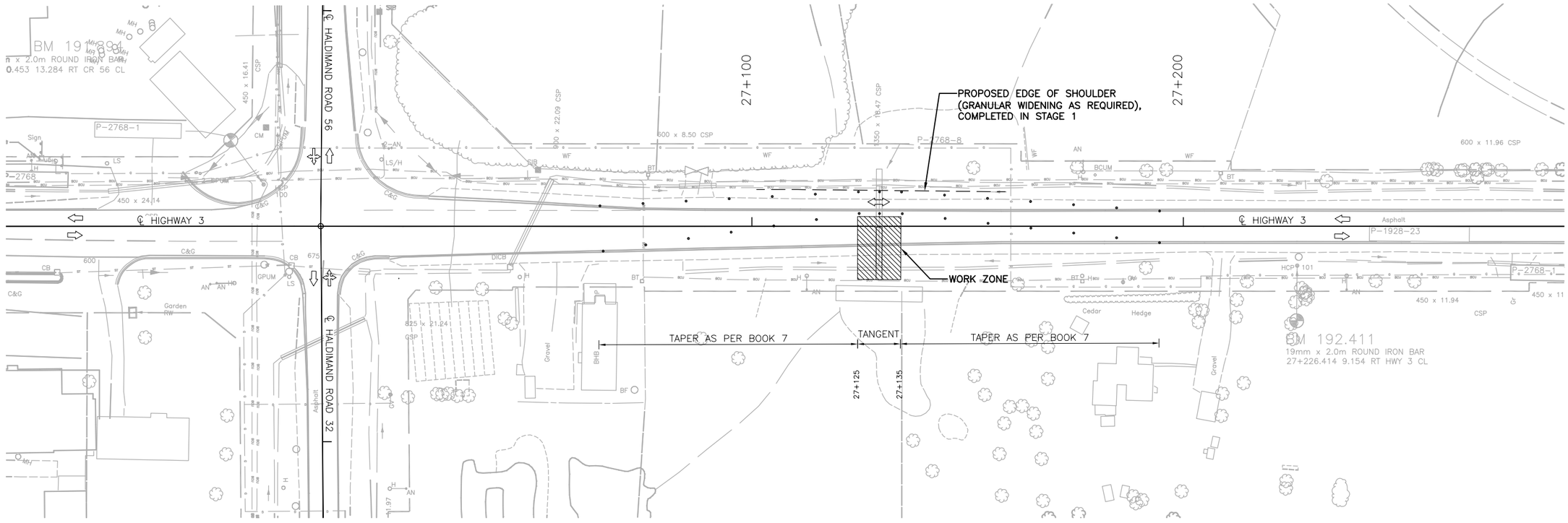
- TC-54 (NOTE 2)
- DIRECTION OF TRAVEL

NOTES:

1. ALL LANE CLOSURES TO BE IN ACCORDANCE WITH ONTARIO TRAFFIC MANUAL (OTM) BOOK 7.
2. TC-54'S SPACING TO BE IN ACCORDANCE WITH OTM BOOK 7.
3. ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED.



STAGE 1



STAGE 2

SCALE
5m 0 10m
Horizontal

LICENSED PROFESSIONAL ENGINEER
A. J. CRAGG
100123262
PROVINCE OF ONTARIO

MINISTRY OF TRANSPORTATION, ONTARIO
PR-D-707 88-05

MINISTRY OF TRANSPORTATION, ONTARIO
PR-D-707 88-05

SUPPLEMENTAL LEGEND

TC-54 (NOTE 2)

DIRECTION OF TRAVEL

METRIC

NOTES:

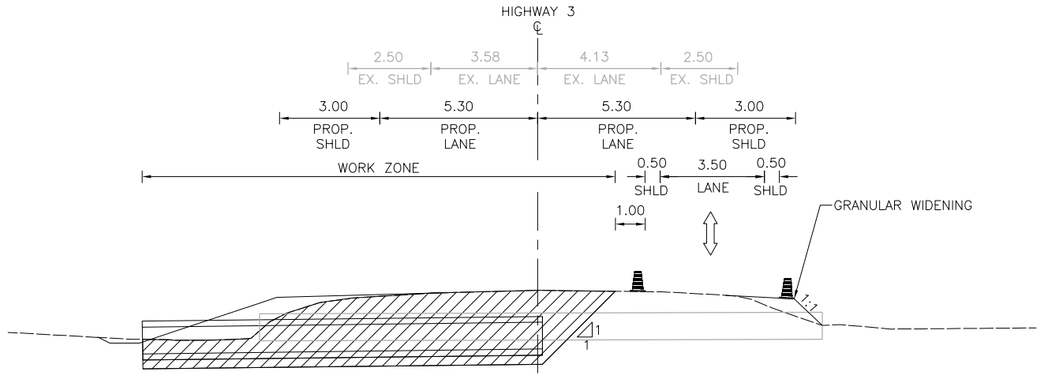
1. ALL LANE CLOSURES TO BE IN ACCORDANCE WITH ONTARIO TRAFFIC MANUAL (OTM) BOOK 7.
2. TC-54'S SPACING TO BE IN ACCORDANCE WITH OTM BOOK 7.
3. ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED.

PLATE No
CONT 2019-3006
WP 3056-10-00

CULVERT STAGING SECTIONS

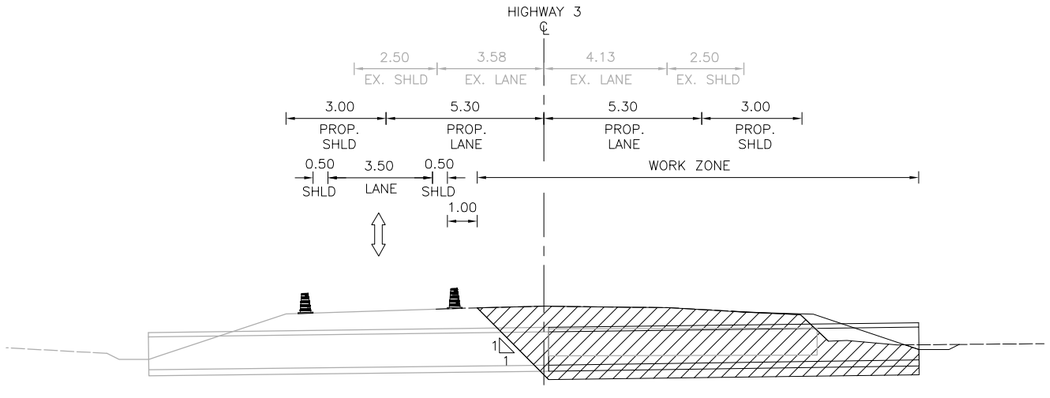
Survey _____ Revised _____

SHEET 9



STAGE 1
CULVERT 8
N.T.S.

CONSTRUCTION SEQUENCE: STAGE 1	
TRAFFIC	CONSTRUCTION
THE FOLLOWING TRAFFIC CONSTRAINTS APPLY AS SPECIFIED ELSEWHERE WITHIN THE CONTRACT DOCUMENTS: • HIGHWAY 3 TRAFFIC REDUCED TO A SINGLE LANE ON THE SOUTH SIDE. • ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED AT ALL TIMES.	• COMPLETE GRANULAR WIDENING ON SOUTH SIDE TO TOP OF EXISTING GRANULAR PROFILE PRIOR TO LANE REDUCTION. • CONSTRUCT NORTH SIDE CULVERT. • COMPLETE NORTH SIDE ROAD WIDENING TO TOP OF GRANULAR PROFILE. • MAINTAIN EXISTING ROADSIDE AND CULVERT DRAINAGE.



STAGE 2
CULVERT 8
N.T.S.

CONSTRUCTION SEQUENCE: STAGE 2	
TRAFFIC	CONSTRUCTION
THE FOLLOWING TRAFFIC CONSTRAINTS APPLY AS SPECIFIED ELSEWHERE WITHIN THE CONTRACT DOCUMENTS: • HIGHWAY 3 TRAFFIC REDUCED TO SINGLE LANE A ON THE NORTH SIDE. • ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED AT ALL TIMES.	• CONSTRUCT SOUTH SIDE CULVERT. • COMPLETE SOUTH SIDE ROAD WIDENING TO TOP OF GRANULAR PROFILE. • DRAINAGE REINSTATED THROUGH NEW CULVERT.

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100123262
PROVINCE OF ONTARIO

SCALE
N.T.S.

METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

CULVERT STAGING
CULVERT 10

Survey _____ Revised _____

SHEET 10

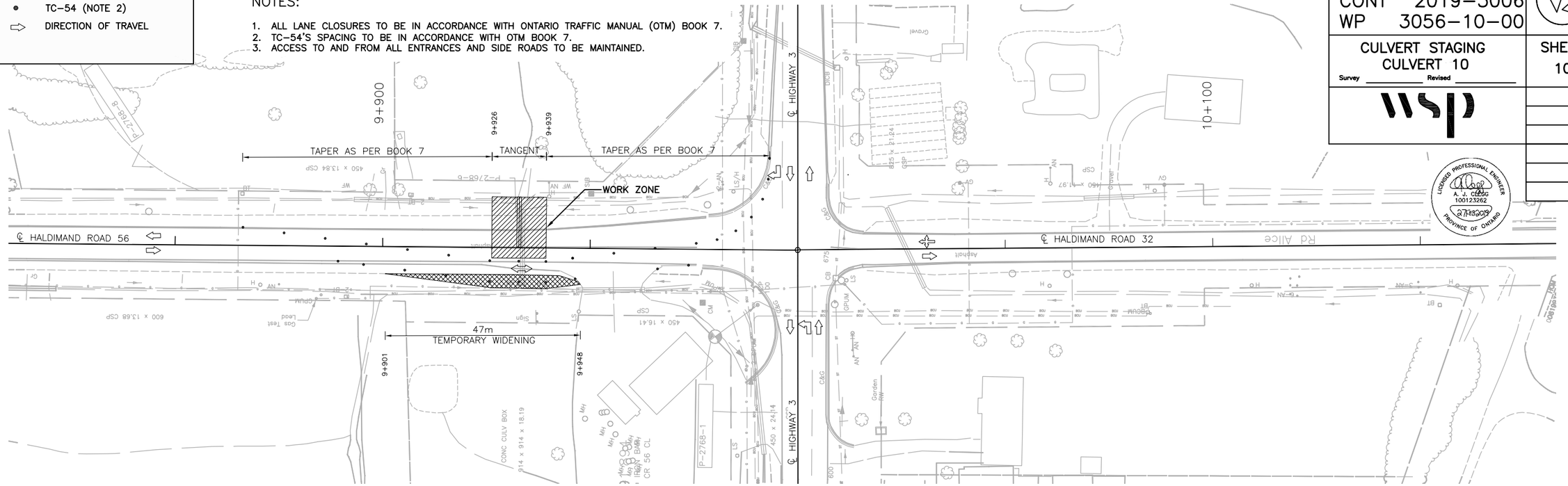
MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

SUPPLEMENTAL LEGEND

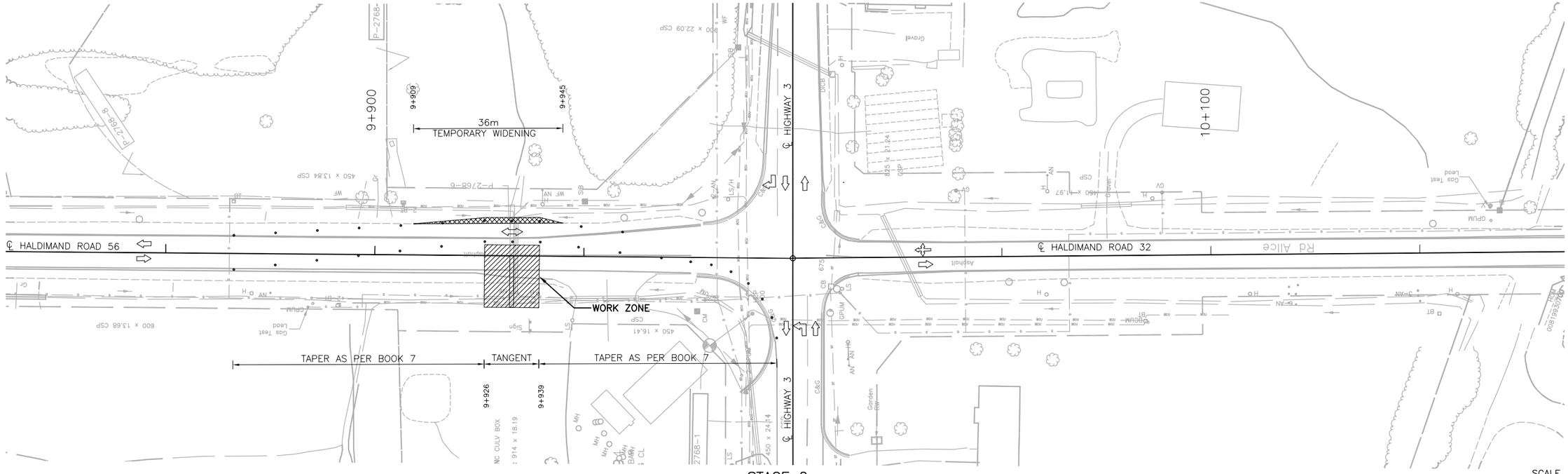
- TC-54 (NOTE 2)
- DIRECTION OF TRAVEL

NOTES:

1. ALL LANE CLOSURES TO BE IN ACCORDANCE WITH ONTARIO TRAFFIC MANUAL (OTM) BOOK 7.
2. TC-54'S SPACING TO BE IN ACCORDANCE WITH OTM BOOK 7.
3. ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED.



STAGE 1



STAGE 2

SCALE
5m 0 10m
Horizontal

METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

SHEET 11

CULVERT STAGING SECTIONS

Survey _____ Revised _____

wsp

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PROVINCE OF ONTARIO

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

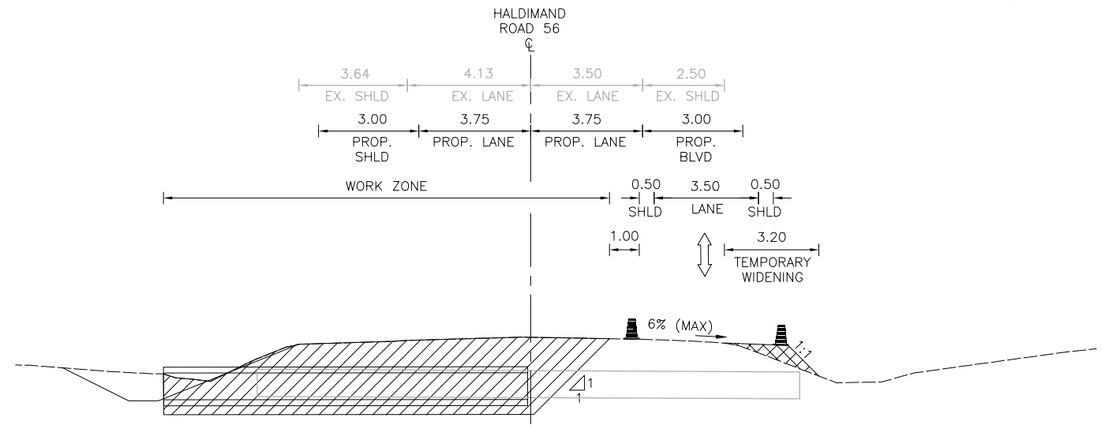
SUPPLEMENTAL LEGEND

TC-54 (NOTE 2)

DIRECTION OF TRAVEL

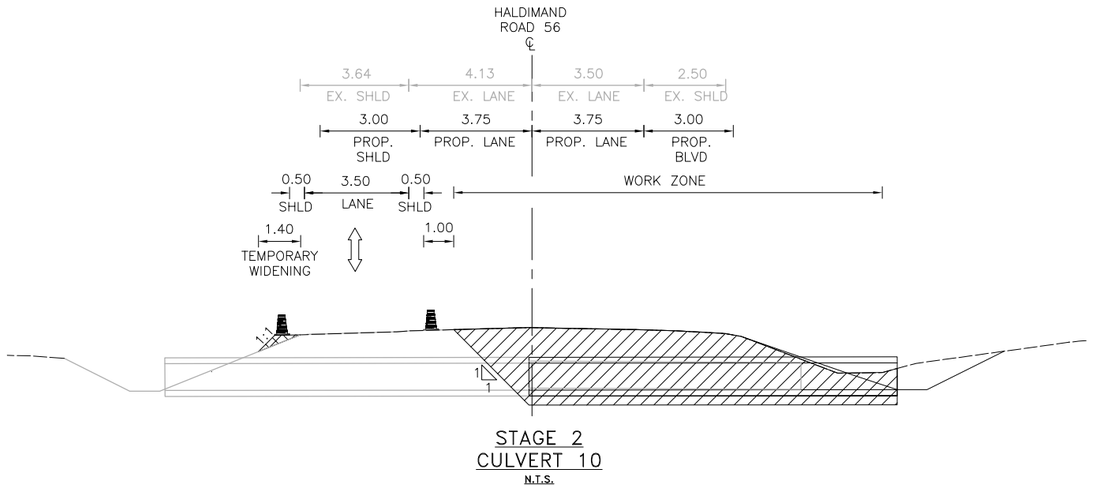
NOTES:

1. ALL LANE CLOSURES TO BE IN ACCORDANCE WITH ONTARIO TRAFFIC MANUAL (OTM) BOOK 7.
2. TC-54'S SPACING TO BE IN ACCORDANCE WITH OTM BOOK 7.
3. ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED.



STAGE 1
CULVERT 10
N.T.S.

CONSTRUCTION SEQUENCE: STAGE 1	
TRAFFIC	CONSTRUCTION
THE FOLLOWING TRAFFIC CONSTRAINTS APPLY AS SPECIFIED ELSEWHERE WITHIN THE CONTRACT DOCUMENTS: • HALDIMAND ROAD 56 TRAFFIC REDUCED TO A SINGLE LANE ON THE WEST SIDE. • ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED AT ALL TIMES.	• TEMPORARILY WIDEN HALDIMAND ROAD 56 ON THE WEST SIDE • CONSTRUCT EAST SIDE CULVERT. • COMPLETE EAST SIDE ROAD WIDENING TO TOP OF GRANULAR PROFILE. • MAINTAIN EXISTING ROADSIDE AND CULVERT DRAINAGE.



STAGE 2
CULVERT 10
N.T.S.

CONSTRUCTION SEQUENCE: STAGE 2	
TRAFFIC	CONSTRUCTION
THE FOLLOWING TRAFFIC CONSTRAINTS APPLY AS SPECIFIED ELSEWHERE WITHIN THE CONTRACT DOCUMENTS: • HALDIMAND ROAD 56 TRAFFIC REDUCED TO A SINGLE LANE ON THE EAST SIDE. • ACCESS TO AND FROM ALL ENTRANCES AND SIDE ROADS TO BE MAINTAINED AT ALL TIMES.	• TEMPORARILY WIDEN HALDIMANE ROAD 56 ON THE EAST SIDE. • CONSTRUCT WEST SIDE CULVERT. • COMPLETE WEST SIDE ROAD WIDENING TO TOP OF GRANULAR PROFILE. • DRAINAGE REINSTATED THROUGH NEW CULVERT.

SCALE
N.T.S.

METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

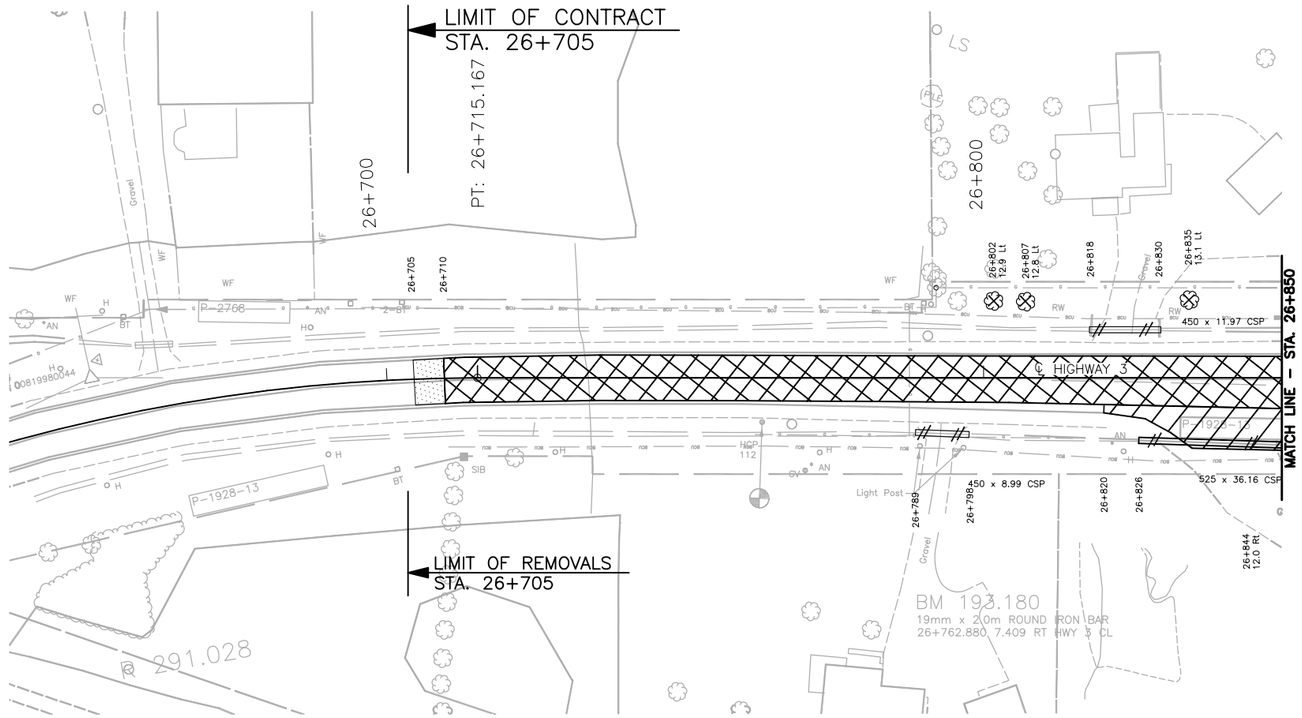
REMOVALS
STA 26+705 TO STA 27+100
Survey _____ Revised _____

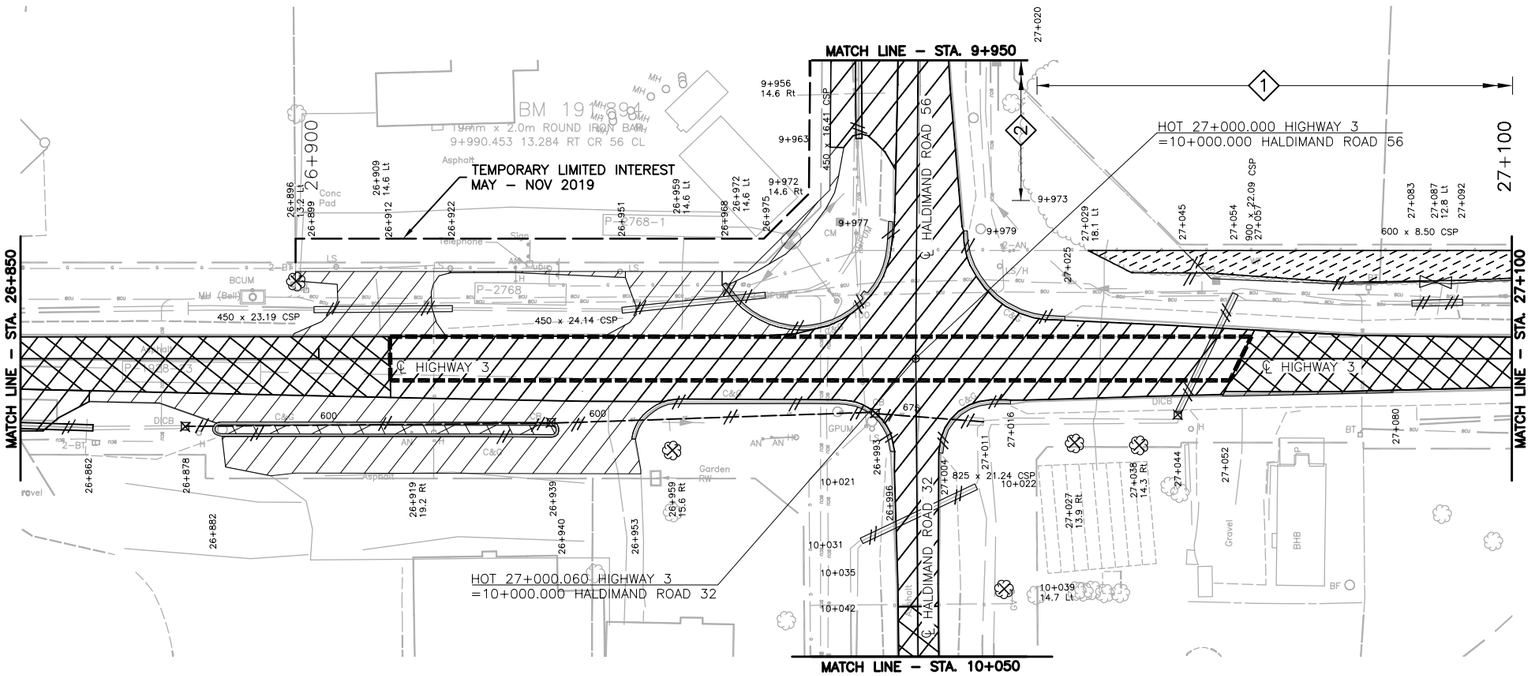
SHEET 12

wsp

LEGEND

- REMOVAL OF ASPHALT PAVEMENT PARTIAL DEPTH: 40mm
- REMOVAL OF ASPHALT PAVEMENT PARTIAL DEPTH: 90-130mm
- REMOVAL OF ASPHALT PAVEMENT FULL DEPTH
- GRUBBING (AREA)
- CATCH BASIN REMOVAL
- GRUBBING (EACH)
- FENCE REMOVAL
- CULVERT REMOVAL
- CURB AND GUTTER REMOVAL
- STORM SEWER REMOVAL
- ENTRANCE GATE REMOVAL
- ENVIRONMENTALLY SENSITIVE AREA
- APRROXIMATE LIMIT OF NON-HAZARDOUS EARTH





SCALE
5m 0 10m
Horizontal

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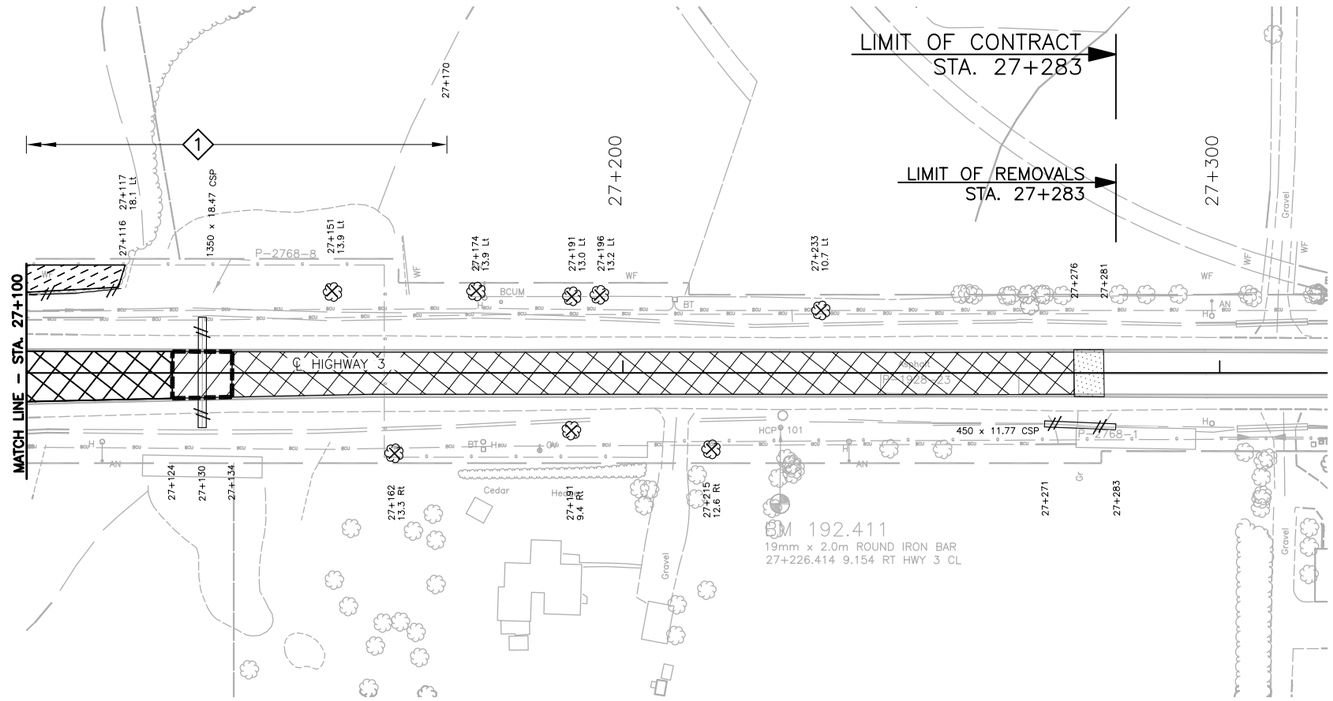
MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

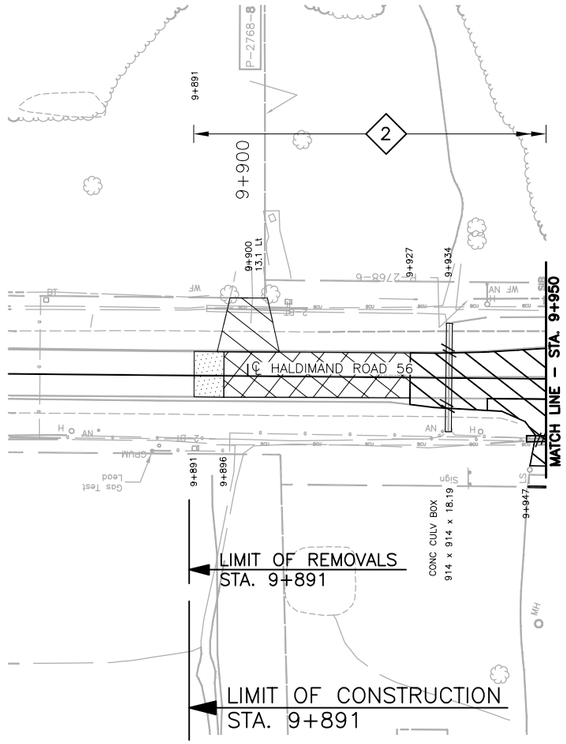
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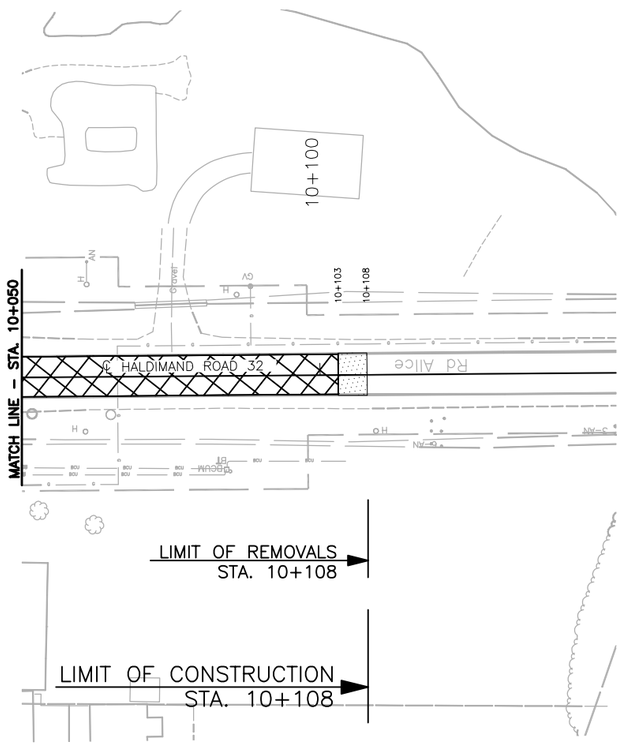
PLATE No
CONT 2019-3006
WP 3056-10-00

REMOVALS
STA 27+100 TO STA 27+283
Survey _____ Revised _____

SHEET 13







SCALE
5m 0 10m
Horizontal

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

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METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

PAVEMENT DATA CHART
STA TO STA
Survey _____ Revised _____

SHEET 14

wsp

LICENSED PROFESSIONAL ENGINEER
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PROVINCE OF ONTARIO

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 86-05

LOCATION	DRIVING LANES				WIDENING			SHOULDERS (PPS)			BOULEVARDS	PADDING
	SURFACE COURSE	BINDER COURSE	UPPER BINDER COURSE	LOWER BINDER COURSE	SURFACE COURSE	UPPER BINDER COURSE	LOWER BINDER COURSE	SURFACE COURSE	UPPER BINDER COURSE	UPPER BINDER COURSE	SURFACE COURSE	LOWER BINDER COURSE
	40mm SUPERPAVE 12.5FC 1	50mm SUPERPAVE 19.0	75mm SUPERPAVE 19.0	75mm SUPERPAVE 19.0	40mm SUPERPAVE 12.5FC 1	75mm SUPERPAVE 19.0	75mm SUPERPAVE 19.0	40mm SUPERPAVE 12.5FC 1	50mm SUPERPAVE 19.0	75mm SUPERPAVE 19.0	50mm SUPERPAVE 12.5FC 1	SUPERPAVE 19.0
PAVEMENT DATA – HIGHWAY 3												
STA. 26+705 TO STA. 26+710	●							●				
STA. 26+710 TO STA.26+720	●	●						●	●			●
STA. 26+720 TO STA. 27+912	●	●			●	●	●	●		●		●
STA. 26+912 TO STA. 27+052	●		●	●	●	●	●	●		●		
STA. 27+052 TO STA. 27+276	●	●			●	●	●	●		●		●
STA. 27+276 TO STA. 27+281	●							●				
PAVEMENT DATA – HALDIMAND ROAD 56												
STA. 9+891 TO STA. 9+896	●							●				
STA. 9+896 TO STA. 9+927	●	●						●	●			●
STA. 9+927 TO STA. 9+994	●		●	●	●	●	●	●		●		
PAVEMENT DATA – HALDIMAND ROAD 32												
STA. 10+006 TO STA. 10+042	●		●	●	●	●	●	●		●		
STA. 10+042 TO STA. 10+103	●	●			●	●	●	●		●		●
STA. 10+103 TO STA. 10+108	●							●				
PAVED BOULEVARDS											●	
COMMERCIAL ENTRANCES	●	●										
TRENCH REINSTATEMENT			●	●								

SCALE
N.T.S.

METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

NEW CONSTRUCTION
STA 26+705 TO STA 26+850
Survey _____ Revised _____

SHEET 15

wsp

LICENSED PROFESSIONAL ENGINEER
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100123262
27 FEB 2019
PROVINCE OF ONTARIO

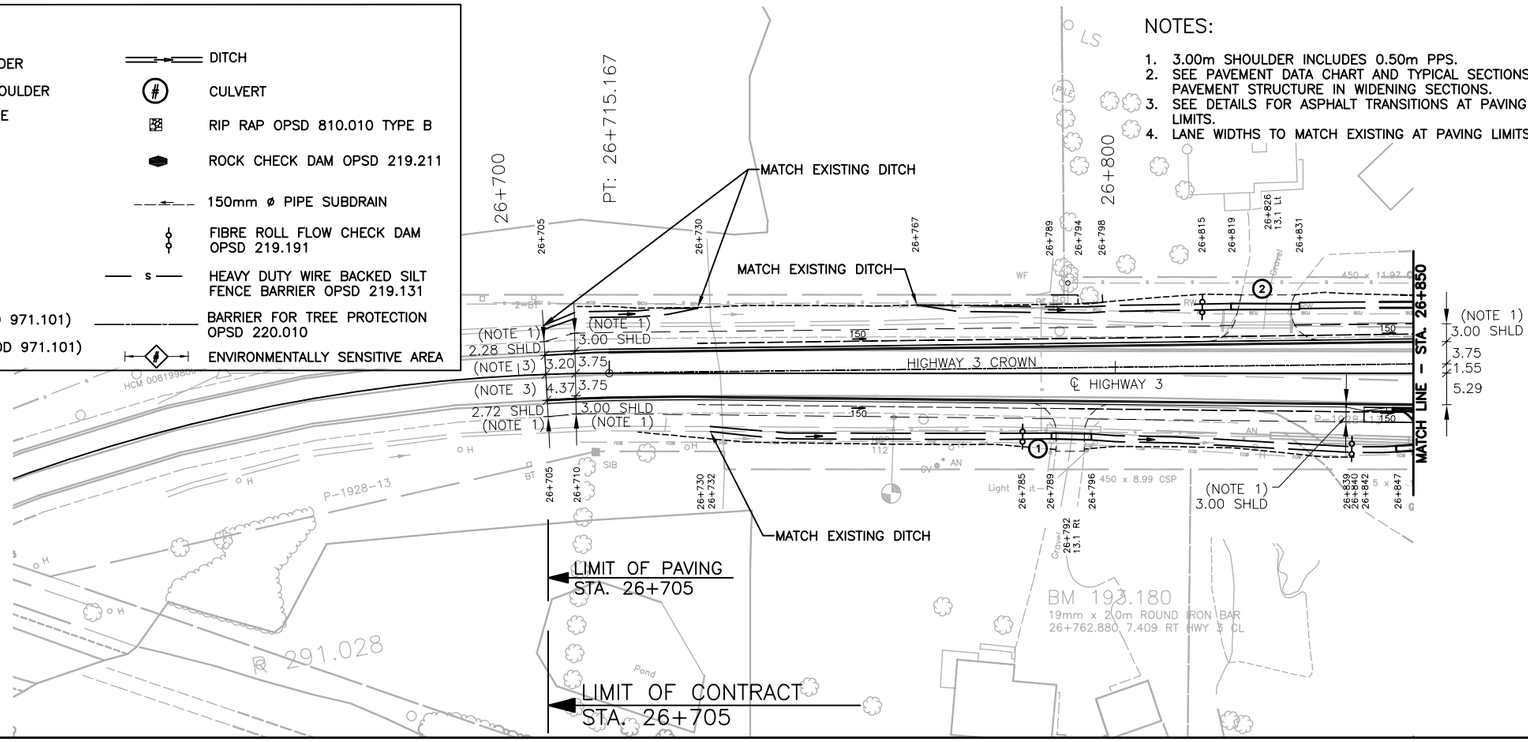
MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

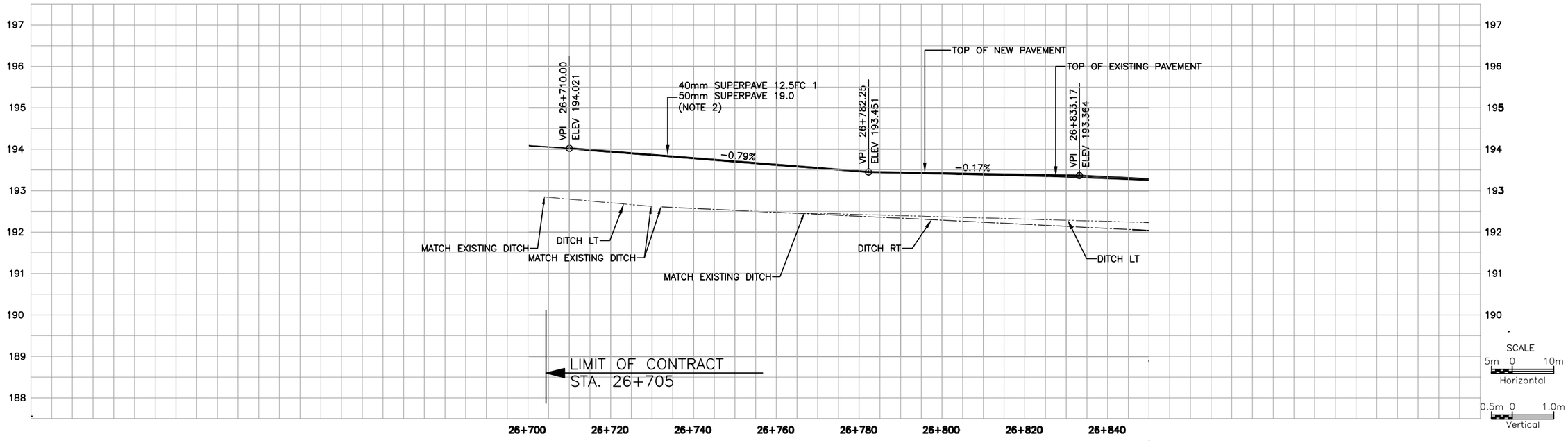
LEGEND

FPS	FULLY PAVED SHOULDER
PPS	PARTIALLY PAVED SHOULDER
#	MH/CB/DI STRUCTURE
	DROP CURB
	OPSD 608.010
	OPSD 604.010
	OPSD 605.010
	OPSD 605.030
	DROP CURB
	HIGHWAY GATE (MTOD 971.101)
	HIGHWAY FENCE (MTOD 971.101)
	DITCH
#	CULVERT
	RIP RAP OPSD 810.010 TYPE B
	ROCK CHECK DAM OPSD 219.211
	150mm ø PIPE SUBDRAIN
	FIBRE ROLL FLOW CHECK DAM OPSD 219.191
s	HEAVY DUTY WIRE BACKED SILT FENCE BARRIER OPSD 219.131
	BARRIER FOR TREE PROTECTION OPSD 220.010
#	ENVIRONMENTALLY SENSITIVE AREA

NOTES:

1. 3.00m SHOULDER INCLUDES 0.50m PPS.
2. SEE PAVEMENT DATA CHART AND TYPICAL SECTIONS FOR PAVEMENT STRUCTURE IN WIDENING SECTIONS.
3. SEE DETAILS FOR ASPHALT TRANSITIONS AT PAVING LIMITS.
4. LANE WIDTHS TO MATCH EXISTING AT PAVING LIMITS.



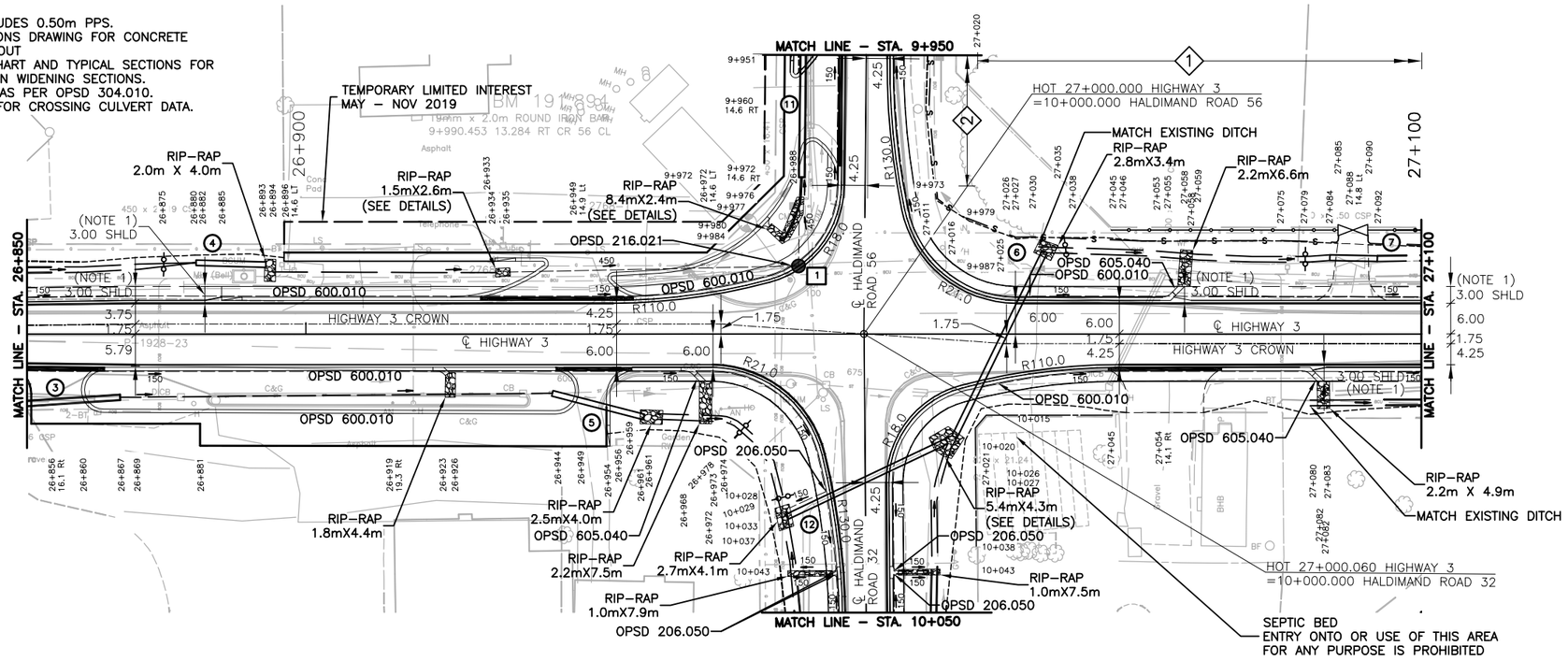


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LAST UPDATED: Mar 8, 2019-11:28
PRINTED: Mar 8, 2019-11:39

METRIC

NOTES:

1. 3.00m SHOULDER INCLUDES 0.50m PPS.
2. SEE PAVEMENT ELEVATIONS DRAWING FOR CONCRETE CURB AND GUTTER LAYOUT
3. SEE PAVEMENT DATA CHART AND TYPICAL SECTIONS FOR PAVEMENT STRUCTURE IN WIDENING SECTIONS.
4. SIDE ROAD TREATMENT AS PER OPSD 304.010.
5. SEE DETAILS DRAWING FOR CROSSING CULVERT DATA.



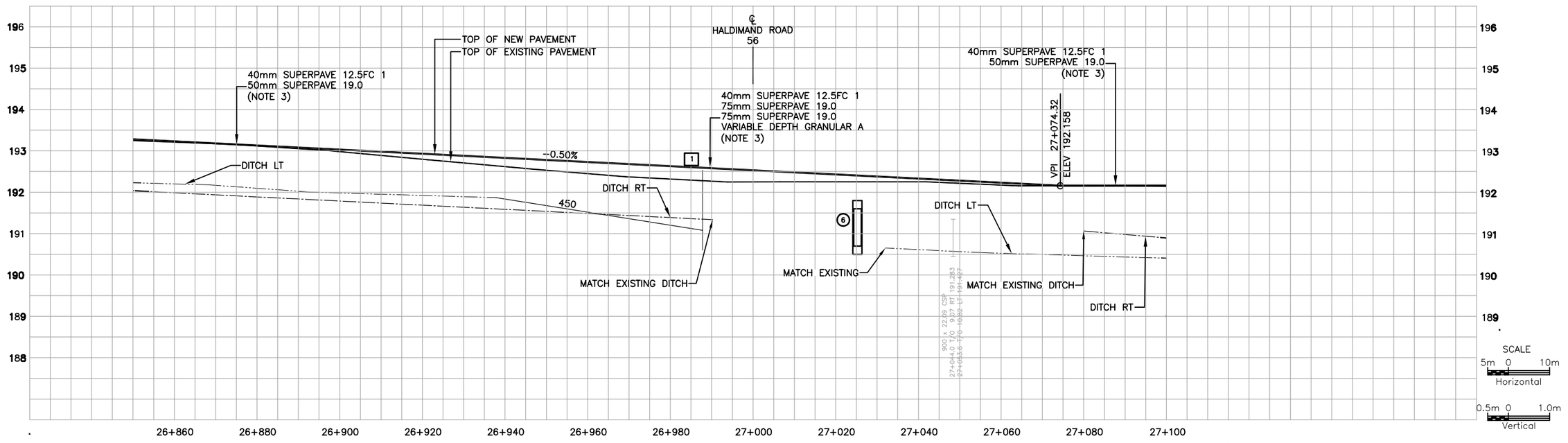


PLATE No
CONT 2019–3006
WP 3056–10–00

NEW CONSTRUCTION
STA 26+850 TO STA 27+100
Survey _____ Revised _____

SHEET 16

LICENSED PROFESSIONAL ENGINEER
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PROVINCE OF ONTARIO

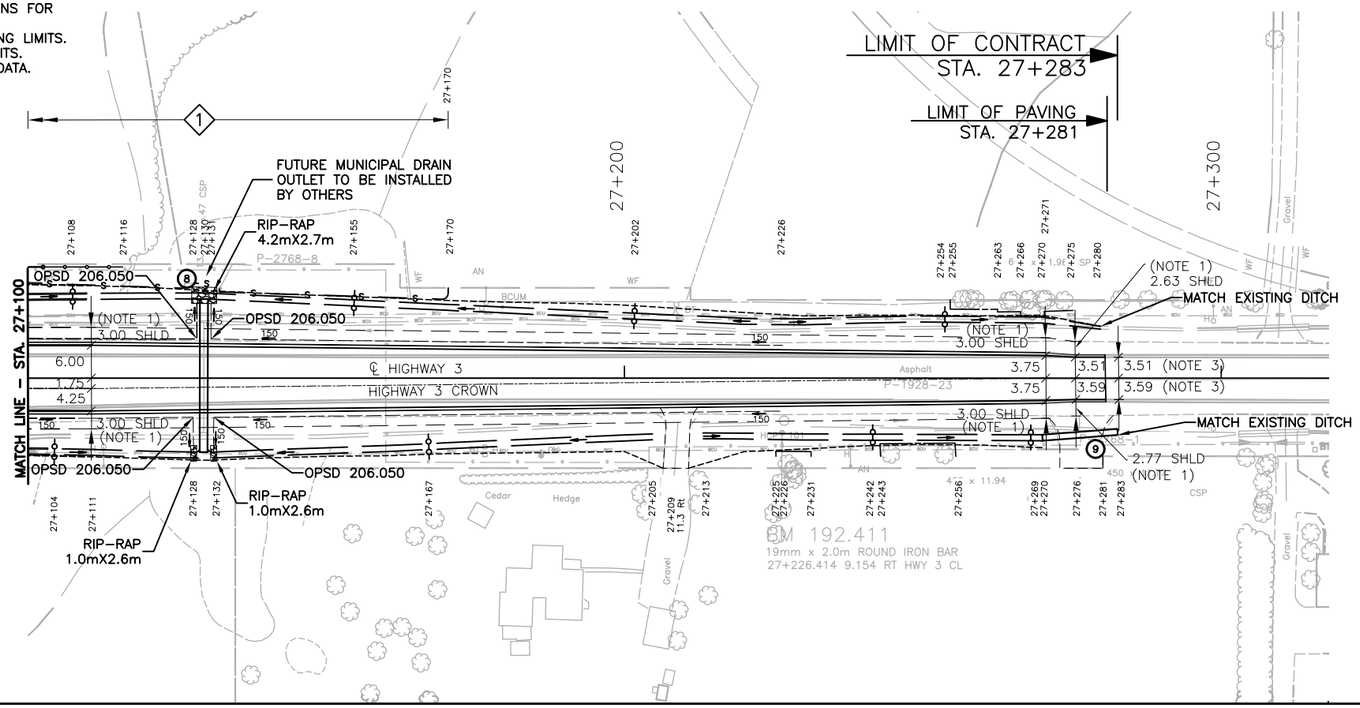
MINISTRY OF TRANSPORTATION, ONTARIO PR–D–707 88–05

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PRINTED: Mar 8, 2019–11:39

METRIC

NOTES:

1. 3.00m SHOULDER INCLUDES 0.50m PPS.
2. SEE PAVEMENT DATA CHART AND TYPICAL SECTIONS FOR PAVEMENT STRUCTURE IN WIDENING SECTIONS.
3. SEE DETAILS FOR ASPHALT TRANSITIONS AT PAVING LIMITS.
4. LANE WIDTHS TO MATCH EXISTING AT PAVING LIMITS.
5. SEE DETAILS DRAWING FOR CROSSING CULVERT DATA.



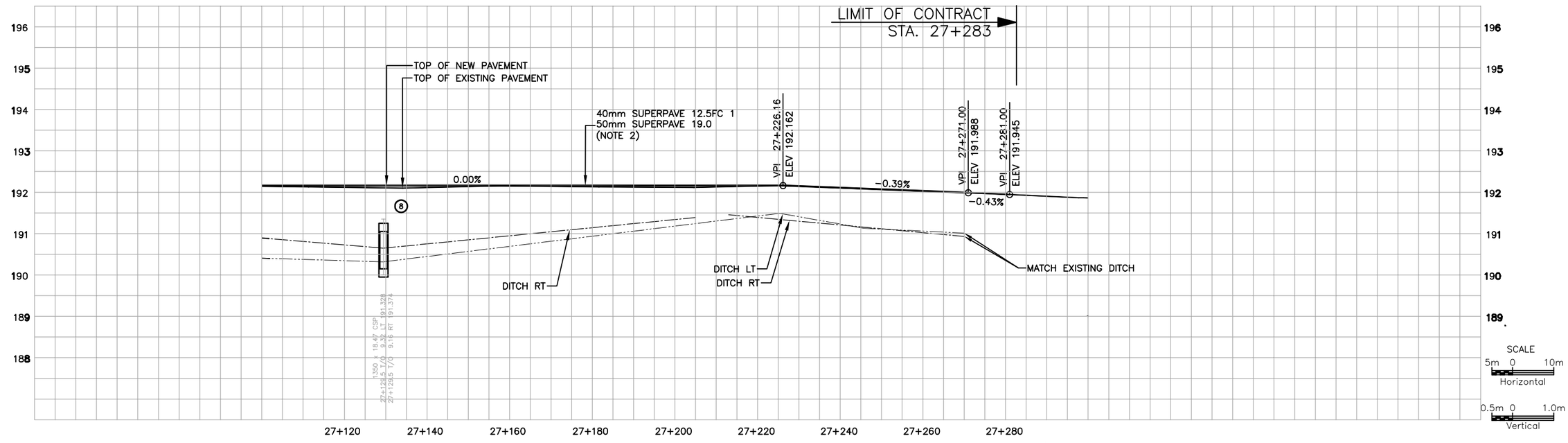


PLATE No
CONT 2019-3006
WP 3056-10-00

NEW CONSTRUCTION
STA 27+100 TO STA 27+283
Survey _____ Revised _____

SHEET 17

wsp

LICENSED PROFESSIONAL ENGINEER
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PROVINCE OF ONTARIO

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

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METRIC

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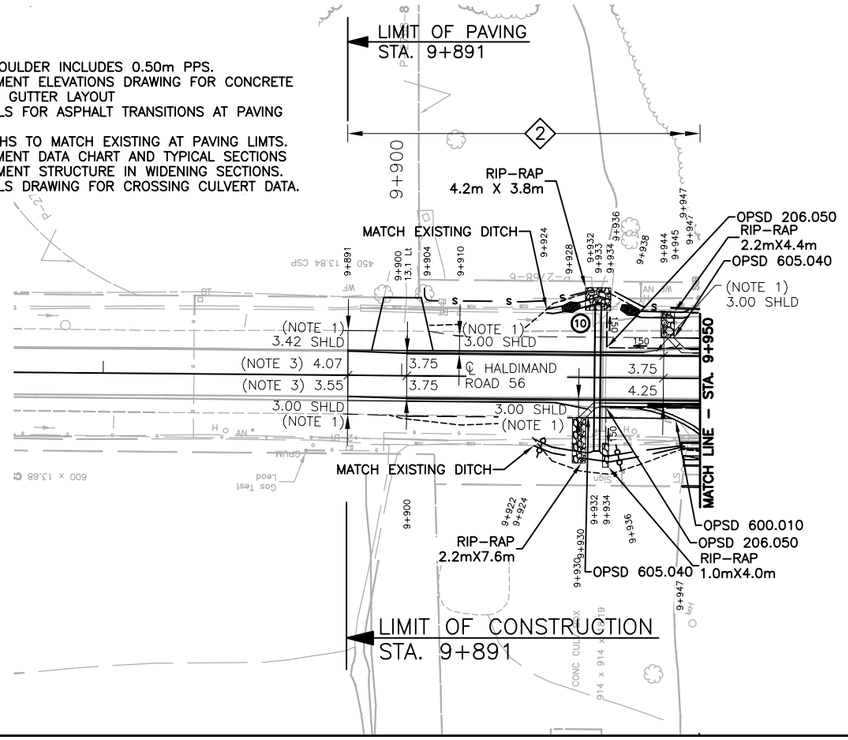
CONT 2019-3006
WP 3056-10-00

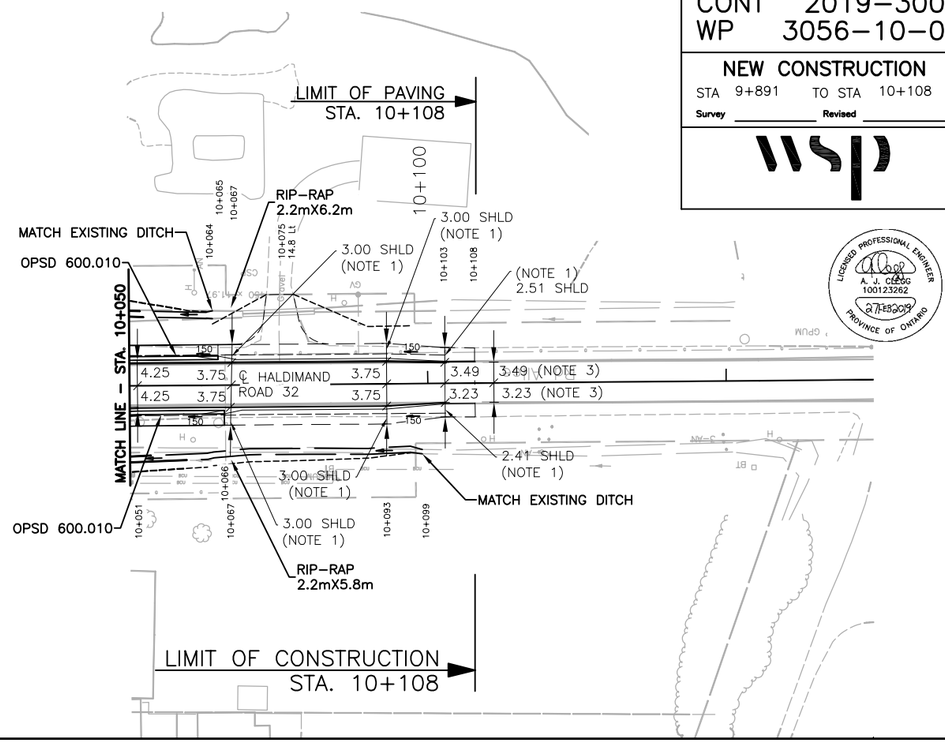
NEW CONSTRUCTION
STA 9+891 TO STA 10+108
Survey _____ Revised _____

SHEET 18

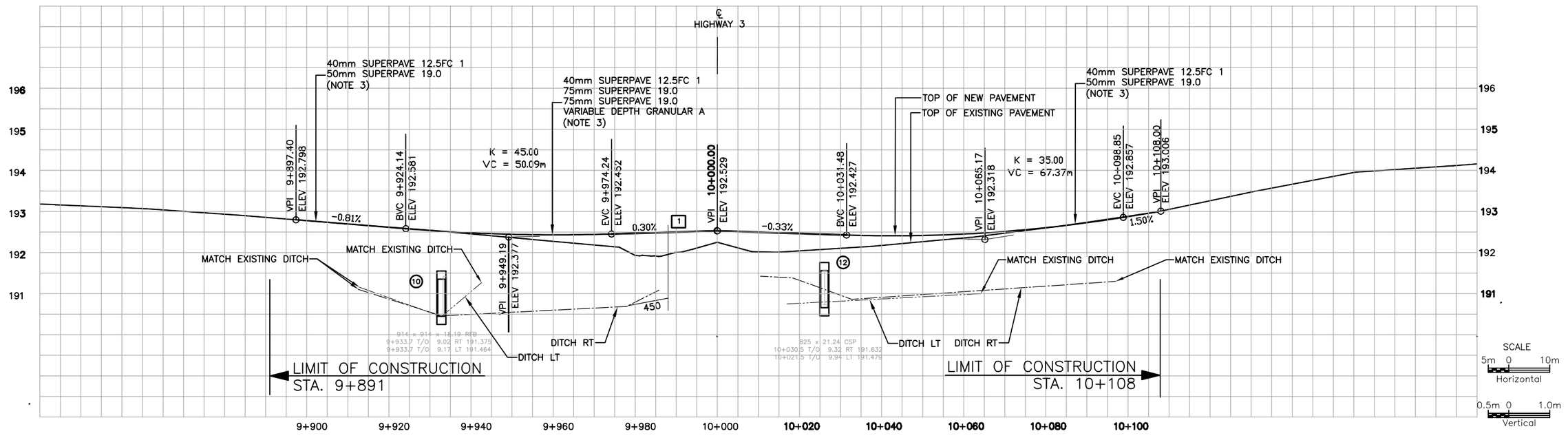
NOTES:

1. 3.00m SHOULDER INCLUDES 0.50m PPS.
2. SEE PAVEMENT ELEVATIONS DRAWING FOR CONCRETE CURB AND GUTTER LAYOUT
3. SEE DETAILS FOR ASPHALT TRANSITIONS AT PAVING LIMITS.
4. LANE WIDTHS TO MATCH EXISTING AT PAVING LIMTS.
5. SEE PAVEMENT DATA CHART AND TYPICAL SECTIONS FOR PAVEMENT STRUCTURE IN WIDENING SECTIONS.
6. SEE DETAILS DRAWING FOR CROSSING CULVERT DATA.





LICENSED PROFESSIONAL ENGINEER
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27 FEB 2019
PROVINCE OF ONTARIO



DRAWING PATH: I:\Kitchener\MRC\Drawings\2012\38 (MRC_KIT)\3812001 - TPM Intersection Improvements at 4 locations\Contract Sheets\Highway 3 - Haldimand 56\
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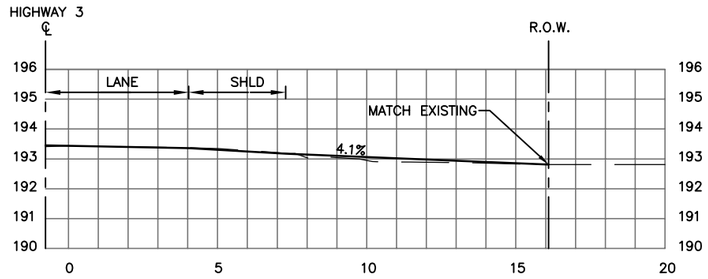
METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

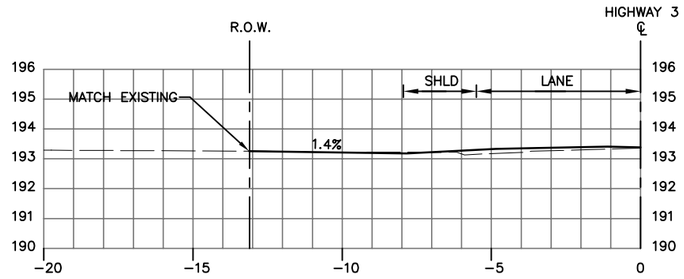
ENTRANCE PROFILES
STA TO STA
Survey _____ Revised _____

SHEET 19

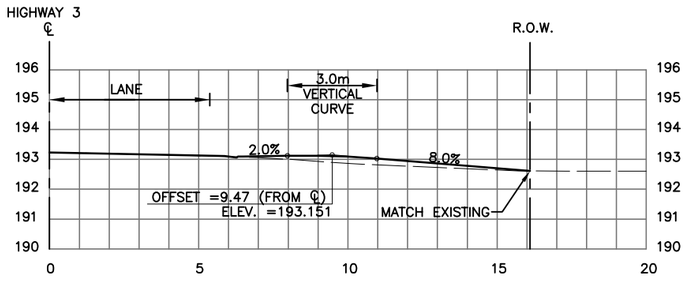
MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05



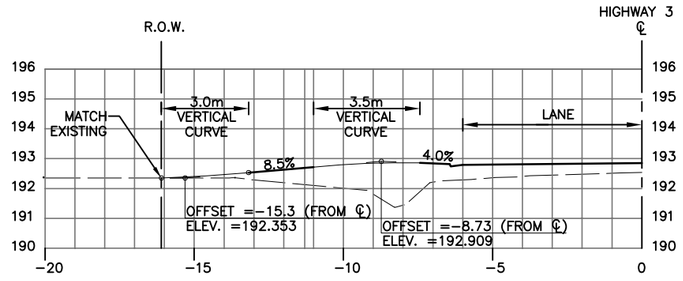
HWY. 3 STA. 26+792 RT



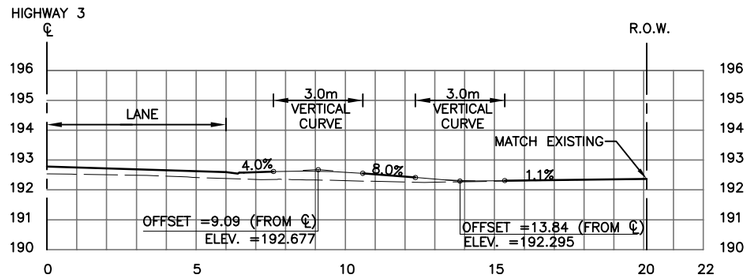
HWY. 3 STA. 26+826 LT



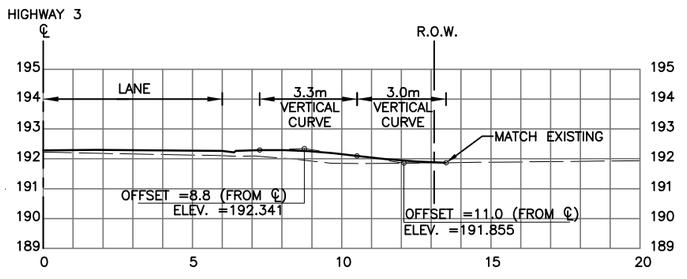
HWY. 3 STA. 26+856 RT



HWY. 3 STA. 26+949 LT



HWY. 3 STA. 26+950 RT



HWY. 3 STA. 27+054 RT

SCALE
N.T.S.

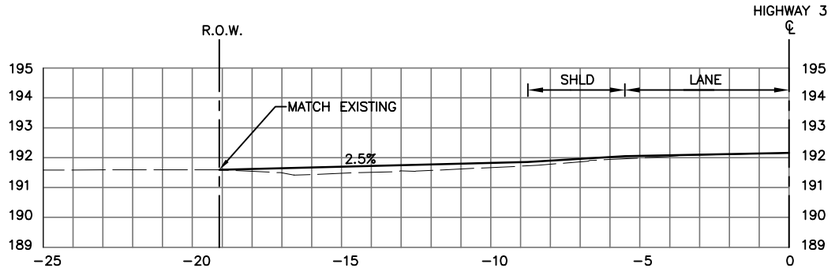
METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

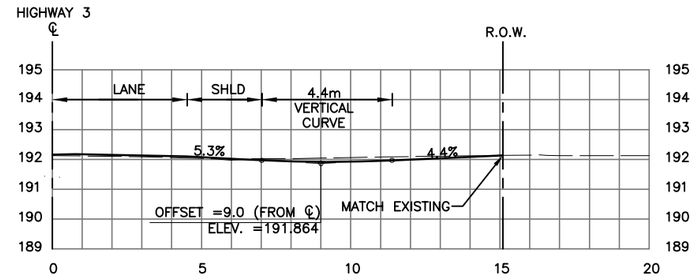
ENTRANCE PROFILES
STA TO STA
Survey _____ Revised _____

SHEET 20

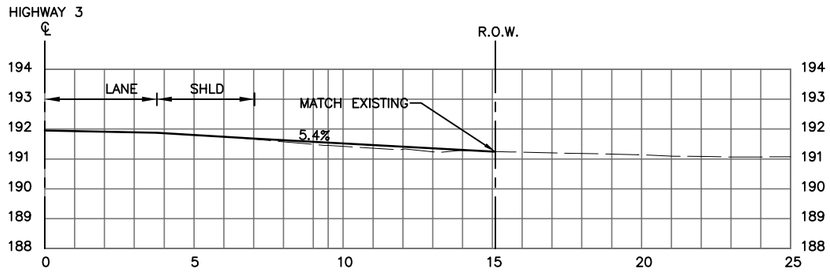
MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 86-05



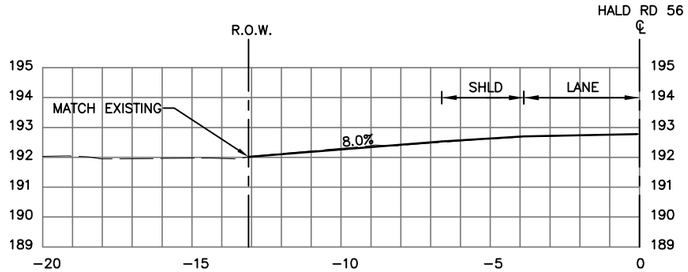
HWY. 3 STA. 27+088 LT



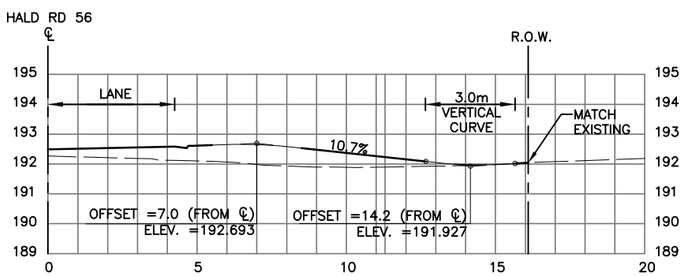
HWY. 3 STA. 27+209 RT



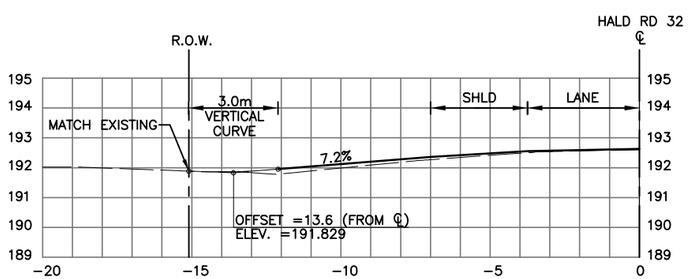
HWY. 3 STA. 27+276 RT



HALD RD. 56 STA. 9+900 LT



HALD RD. 56 STA. 9+960 RT



HALD RD. 32 STA. 10+075 LT

SCALE
N.T.S.

METRIC

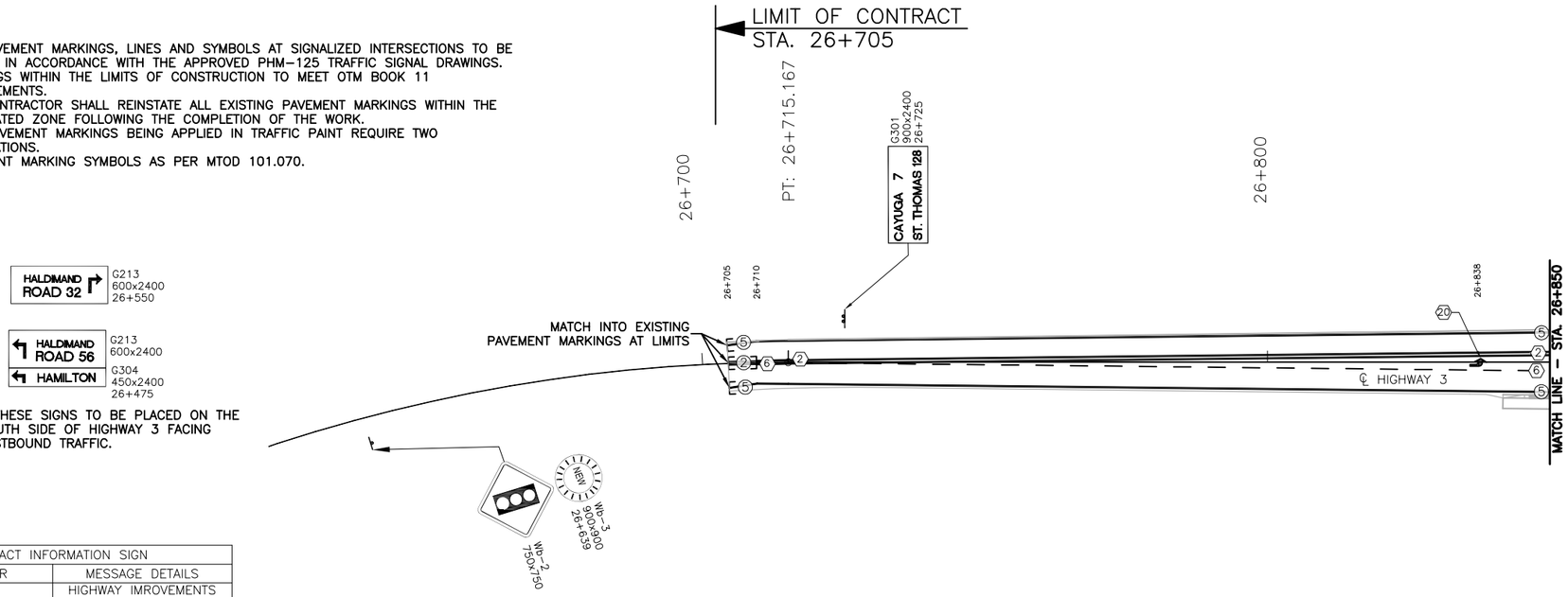
PLATE No
CONT 2019-3006
WP 3056-10-00

PAVEMENT MARKINGS AND SIGNING
STA 26+705 TO STA 27+100
Survey _____ Revised _____

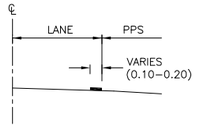
SHEET 21

NOTES:

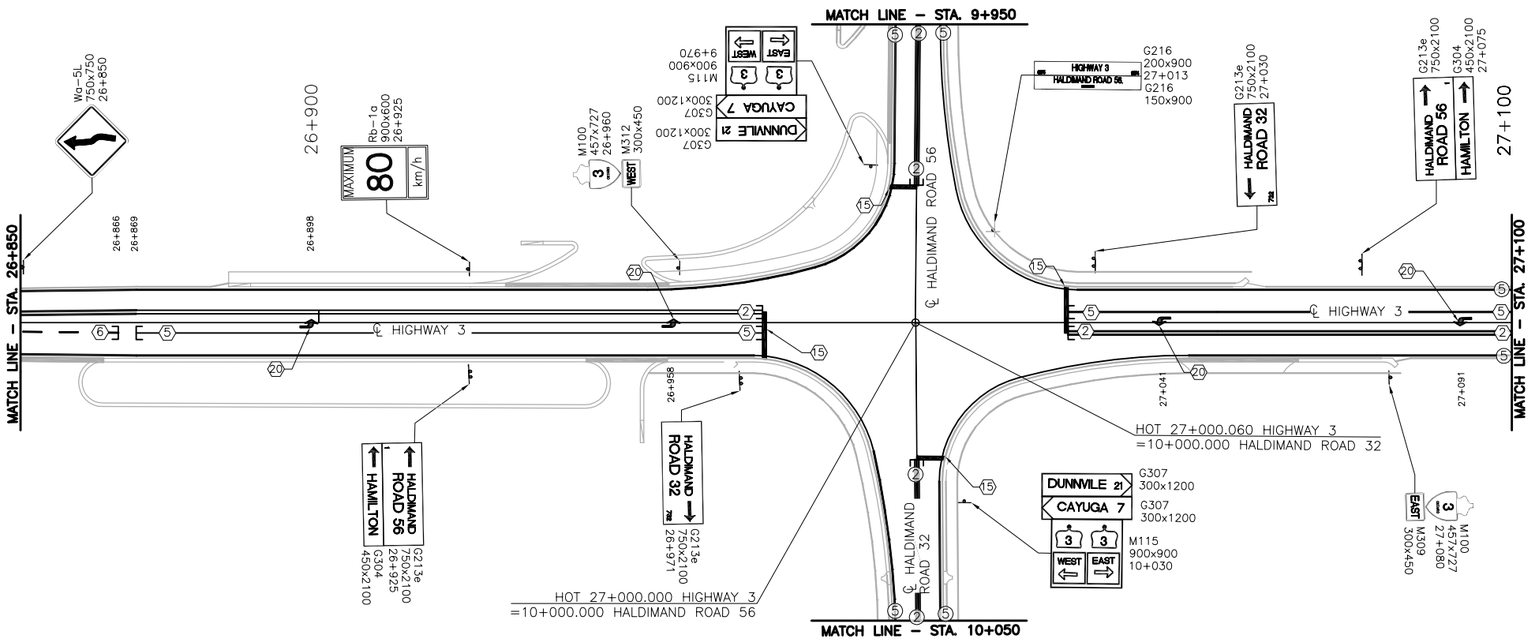
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2. MARKINGS WITHIN THE LIMITS OF CONSTRUCTION TO MEET OTM BOOK 11 REQUIREMENTS.
3. THE CONTRACTOR SHALL REINSTATE ALL EXISTING PAVEMENT MARKINGS WITHIN THE DESIGNATED ZONE FOLLOWING THE COMPLETION OF THE WORK.
4. NEW PAVEMENT MARKINGS BEING APPLIED IN TRAFFIC PAINT REQUIRE TWO APPLICATIONS.
5. PAVEMENT MARKING SYMBOLS AS PER MTOD 101.070.



CONTRACT INFORMATION SIGN	
SIGN NUMBER	MESSAGE DETAILS
TC-81A	HIGHWAY IMROVEMENTS NEXT 2 km



EDGE LINE PAVEMENT MARKING DETAIL (TYP.)
N.T.S.



SCALE
5m 0 10m
Horizontal

DRAWING PATH: I:\Kitchener\MRC\Drawings\2012\38 (MRC_KIT)\3812001 - TPM Intersection Improvements at 4 locations\Contract Sheets\Highway 3 - Haldimand 56\
DRAWING NAME: 3812001_PM01.dwg
DRAWING LAYOUT NAME: 21 PM01
LAST UPDATED: Mar 8, 2019-11:28
PRINTED: Mar 8, 2019-11:40

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

METRIC

NOTES:

1. ALL PAVEMENT MARKINGS, LINES AND SYMBOLS AT SIGNALIZED INTERSECTIONS TO BE PLACED IN ACCORDANCE WITH THE APPROVED PHM-125 TRAFFIC SIGNAL DRAWINGS.
2. MARKINGS WITHIN THE LIMITS OF CONSTRUCTION TO MEET OTM BOOK 11 REQUIREMENTS.
3. THE CONTRACTOR SHALL REINSTATE ALL EXISTING PAVEMENT MARKINGS WITHIN THE DESIGNATED ZONE FOLLOWING THE COMPLETION OF THE WORK.
4. NEW PAVEMENT MARKINGS BEING APPLIED IN TRAFFIC PAINT REQUIRE TWO APPLICATIONS.
5. PAVEMENT MARKING SYMBOLS AS PER MTOD 101.070.

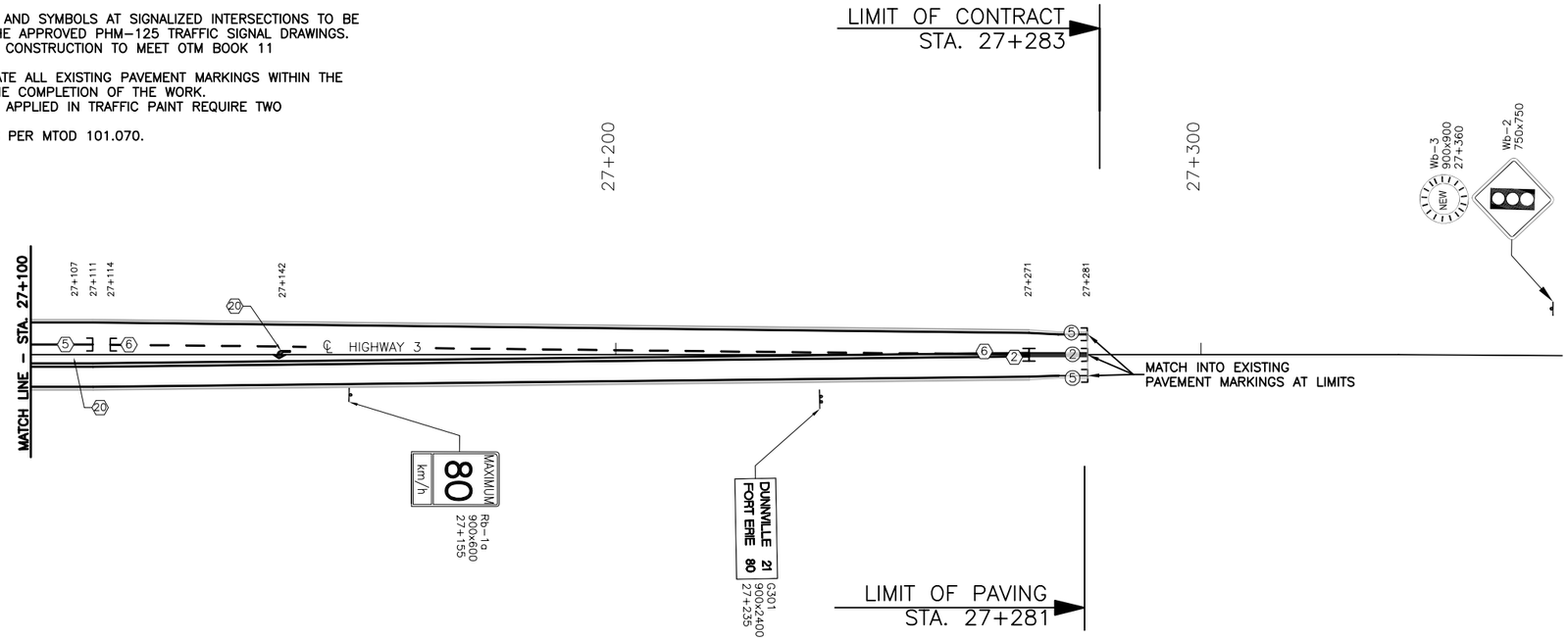


PLATE No
CONT 2019-3006
WP 3056-10-00

PAVEMENT MARKINGS AND SIGNING
STA 27+100 TO STA 27+281
Survey Revised

SHEET 22

wsp

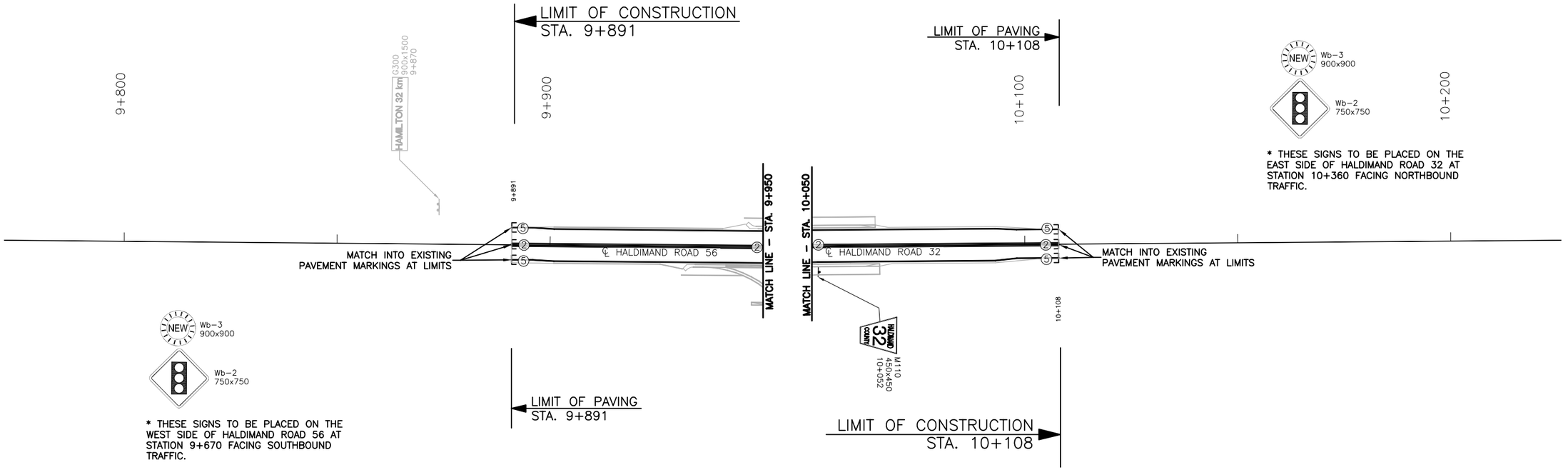
LICENSED PROFESSIONAL ENGINEER
A. J. CASSG
100123262
PROVINCE OF ONTARIO

HALDIMAND ROAD 32 G213 600x2400 27+450

HALDIMAND ROAD 56 G213 600x2400 27+525

HAMILTON G304 450x2400

* THESE SIGNS TO BE PLACED ON THE NORTH SIDE OF HIGHWAY 3 FACING WESTBOUND TRAFFIC.



* THESE SIGNS TO BE PLACED ON THE WEST SIDE OF HALDIMAND ROAD 56 AT STATION 9+670 FACING SOUTHBOUND TRAFFIC.

* THESE SIGNS TO BE PLACED ON THE EAST SIDE OF HALDIMAND ROAD 32 AT STATION 10+360 FACING NORTHBOUND TRAFFIC.

SCALE
5m 0 10m
Horizontal

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

DRAWING PATH: I:\Kitchener\MRC\Drawings\2012\38 (MRC_KIT)\3812001 - TPM Intersection Improvements at 4 locations\Contract Sheets\Highway 3 - Haldimand 56\
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DRAWING LAYOUT NAME: 22_PM02
LAST UPDATED: Mar 8, 2019-11:28
PRINTED: Mar 8, 2019-11:40

METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

SHEET 23

SIGN CHART

STA TO STA

Survey _____ Revised _____

wsp

LICENSED PROFESSIONAL ENGINEER
A. J. CLEGG
100123262
PROVINCE OF ONTARIO

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 86-05

Highway 3					EB								
	Work Details					Sign Details						Support Criteria		
L/R	Final Location	Removal Location	Post Action	Sign Action	Sign Ht (cm)	Sign Code	Sign Size (mm) h x w	Sign Message / Description	Face Dir	Sign Area (m^2)	Comments	Support Area (m^2)	Total Height	Max B_Dim
R	26+475		NP	NS		G213	600x2400	ADVANCED LEFT ARROW, HALDIMAND ROAD 56	W	1.44		2.52	1050	2400
				NS		G304	450x2400	ADVANCED LEFT ARROW, HAMILTON	W	1.08				
R	26+550		NP	NS		G213	600x2400	HALDIMAND ROAD 32, ADVANCED RIGHT ARROW	W	1.44		1.44	600	2400
R	26+639		NP	NS		Wb-3	900x900	NEW	W	0.64	SIGN TO BE TEMPORARILY CONNECTED TO WB-2 POST WITH U-FLANGE	1.20	1650	900
				NS		Wb-2	750x750	TRAFFIC SIGNALS AHEAD	W	0.56	TO BE MOUNTED ON A 89mmX140mm WOODEN POST			
R		26+725	XP	XS		G213	600x2400	ADVANCED LEFT ARROW, HALDIMAND ROAD 56	W					
				XS		G304	450x2400	ADVANCED LEFT ARROW, HAMILTON	W					
				XS		G213	600x2400	HALDIMAND ROAD 32, ADVANCED RIGHT ARROW	W					
R		26+768	XP	XS		Rb-27	900x1200	THROUGH TRAFFIC KEEP RIGHT	W					
R		26+884	XP	XS		Rb-51	600x600	NO PARKING	W					
R	26+925		NP	NS		G213e	750x2100	LEFT ARROW, HALDIMAND ROAD 56 911# 1	W	1.58		2.53	1200	2100
				NS		G304	450x2100	LEFT ARROW, HAMILTON	W	0.95				
R		26+939	XP	XS		Rb-51	600x600	NO PARKING	W					
R		26+959	XP	XS		G213e	750x2100	LEFT ARROW, HALDIMAND ROAD 56 911# 1	W					
				XS		G304	450x2100	LEFT ARROW, HAMILTON	W					
				XS		G213e	750x2100	HALDIMAND ROAD 32, RIGHT ARROW 911# 732	W					
R	26+971		NP	NS		G213e	750X2100	HALDIMAND ROAD 32, RIGHT ARROW 911# 732	W	1.58		1.58	750	2100
R		26+987	XP	XS		Rb-51	600x600	NO PARKING	W					
R		27+007	XP	XS		Ra-1	1200x1200	STOP SIGN	N					
R	27+080	27+084	RL	RS		M100	727x457	KINGS HIGHWAY 3	W	0.33		0.47	1027	457
				RS		M309	300x450	EAST		0.14				
R	27+155	27+227	RL	RS		Rb-1a	900x600	MAXIMUM 80 KM/H	W	0.54		0.54	900	600
R	27+235		NP	NS		G301	900x2400	DUNNVILLE 21, FORT ERIE 80	W	2.16		2.16	900	2400

NOTES

1. EP or Edge of Pavement is the outside edge of the nearest solid white lane edge line, or, if absent, the physical edge of pavement.
2. TODS – Tourism destination signs to be relocated by others

LEGEND

ACTION CODES

SIGNS:
- NS = New sign board installation
- RS = Replace sign with new sign bearing same message. Remove & dispose of existing.
- ES = Existing sign board (an existing support, or salvage elsewhere in Contract.
- XS = Remove and dispose of sign board.

SUPPORTS:
- NP = New support
- RL = Relocate support and dispose of existing
- XP = Remove & dispose of support
- EP = Existing Post
- BLANK = No action to support

SCALE
N.T.S.

METRIC

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 86-05

PLATE No
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WP 3056-10-00

SIGN CHART
STA TO STA
Survey _____ Revised _____

SHEET 24

wsp

LICENSED PROFESSIONAL ENGINEER
A. J. CLEGG
100123262
27/Feb/2019
PROVINCE OF ONTARIO

Highway 3					WB								
	Work Details					Sign Details						Support Criteria		
L/R	Final Location	Removal Location	Post Action	Sign Action	Sign Ht (cm)	Sign Code	Sign Size (mm) h x w	Sign Message / Description	Face Dir	Sign Area (m^2)	Comments	Support Area (m^2)	Total Height	Max B_Dim
R	26+725	26+878	RL	RS		G301	900x2400	CAYUGA 7, ST. THOMAS 128	E	2.16		2.16	900	2400
R	26+850	26+859	RL	RS		Wa-5L	750x750	REVERSE CURVE	E	0.56		0.56	750	750
R		26+896	XP	XS		Rb-51	600x600	NO PARKING	E					
R	26+925	26+791	RL	RS		Rb-1a	900x600	MAXIMUM 80 KM/H	E	0.54		0.54	900	600
R		26+942	XP	XS		Rb-51	600x600	NO PARKING	E					
R	26+960	26+938	RL	RS		M100	457X727	KINGS HIGHWAY 3	E	0.33		0.47	1027	457
				RS		M312	300x450	WEST		0.14				
R		26+994	XP	XS		Ra-1	1200x1200	STOP SIGN	S					
R	27+013		RL	ES		G216	200x900	6075, HIGHWAY 3. 6074	S	0.18		0.32	350	900
				ES		G216	150x900	HALDIMAND ROAD 56	E	0.14				
R	27+030		NP	NS		G213e	750x2100	LEFT ARROW, HALDIMAND ROAD 32 911# 732	E	1.58		1.58	750	2100
R		27+048	XP	XS		G213e	750x2100	LEFT ARROW, HALDIMAND ROAD 32 911# 732	E					
				XS		G213e	750x2100	HALDIMAND ROAD 56, RIGHT ARROW 911# 1	E					
				XS		G304	450x2100	HAMILTON, RIGHT ARROW	E					
R	27+075		NP	NS		G213e	750x2100	HALDIMAND ROAD 56, RIGHT ARROW 911# 1	E	1.58		2.53	1200	2100
				NS		G304	450x2100	HAMILTON, RIGHT ARROW	E	0.95				
R		27+228	XP	XS		G213	600x2400	ADVANCED LEFT ARROW, HALDIMAND ROAD 32	E					
				XS		G213	600x2400	HALDIMAND ROAD 56, ADVANCED RIGHT ARROW	E					
				XS		G304	450x2400	HAMILTON, RIGHT ARROW	E					
R	27+360		NP	NS		Wb-3	900x900	NEW	E	0.56	SIGN TO BE TEMPORARILY CONNECTED TO WB-2 POST WITH U-FLANGE	1.20	1650	900
				NS		Wb-2	750x750	TRAFFIC SIGNALS AHEAD	E	0.64	TO BE MOUNTED ON A 89mmX140mm WOODEN POST			
R	27+450		NP	NS		G213	600x2400	ADVANCED LEFT ARROW, HALDIMAND ROAD 32	E	1.44		1.44	600	2400
R	27+525		NP	NS		G213	600x2400	HALDIMAND ROAD 56, ADVANCED RIGHT ARROW	E	1.44		2.52	1050	2400
				NS		G304	450x2400	HAMILTON, RIGHT ARROW	E	1.08				

SCALE
N.T.S.

METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

SHEET 25

SIGN CHART

STA TO STA

Survey _____ Revised _____

wsp

LICENSED PROFESSIONAL ENGINEER
A. J. CRAIG
100123362
PROVINCE OF ONTARIO

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 86-05

Haldimand Road 56					SB									
	Work Details					Sign Details						Support Criteria		
L/R	Final Location	Removal Location	Post Action	Sign Action	Sign Ht (cm)	Sign Code	Sign Size (mm) h x w	Sign Message / Description	Face Dir	Sign Area (m²)	Comments	Support Area (m²)	Total Height	Max B_Dim
R		9+670	XP	XS			1200x1200	STOP SIGN AHEAD	N					
R	9+670		NP	NS		Wb-3	900x900	NEW	N	0.64	SIGN TO BE TEMPORARILY CONNECTED TO WB-2 POST WITH U-FLANGE	1.20	1650	900
				NS		Wb-2	750X750	TRAFFIC SIGNALS AHEAD	N	0.56	TO BE MOUNTED ON A 89mmX140mm WOODEN POST			
R	9+970	10+011	RL	RS		G307	300x1200	DUNNVILLE 21, LEFT ARROW	N	0.36		1.53	1500	1200
				RS		G307	300x1200	CAYUGA 7, RIGHT ARROW	N	0.36				
				RS		M115	900x900	KINGS HIGHWAY 3, WEST, RIGHT ARROW, EAST, LEFT ARROW	N	0.81				

Haldimand Road 56					NB									
	Work Details					Sign Details						Support Criteria		
L/R	Final Location	Removal Location	Post Action	Sign Action	Sign Ht (cm)	Sign Code	Sign Size (mm) h x w	Sign Message / Description	Face Dir	Sign Area (m²)	Comments	Support Area (m²)	Total Height	Max B_Dim
R		9+960	XP	XS		M115	900x900	KINGS HIGHWAY 3, WEST, LEFT ARROW, EAST, RIGHT ARROW	S					

Haldimand Road 32					NB									
	Work Details					Sign Details						Support Criteria		
L/R	Final Location	Removal Location	Post Action	Sign Action	Sign Ht (cm)	Sign Code	Sign Size (mm) h x w	Sign Message / Description	Face Dir	Sign Area (m²)	Comments	Support Area (m²)	Total Height	Max B_Dim
R	10+030		NP	NS		G307	300x1200	DUNNVILLE 21, RIGHT ARROW	S	0.36		1.53	1500	1200
				NS		G307	300x1200	CAYUGA 7, LEFT ARROW	S	0.36				
				NS		M115	900X900	KINGS HIGHWAY 3, WEST, LEFT ARROW, EAST, RIGHT ARROW	S	0.81				
R		10+153	XP	XS			1200x1200	STOP SIGN AHEAD	S					
R	10+360		NP	NS		Wb-3	900x900	NEW	S	0.64	SIGN TO BE TEMPORARILY CONNECTED TO WB-2 POST WITH U-FLANGE	1.20	1650	900
				NS		Wb-2	750x750	TRAFFIC SIGNALS AHEAD	S	0.56	TO BE MOUNTED ON A 89mmX140mm WOODEN POST			

Haldimand Road 32					SB									
	Work Details					Sign Details						Support Criteria		
L/R	Final Location	Removal Location	Post Action	Sign Action	Sign Ht (cm)	Sign Code	Sign Size (mm) h x w	Sign Message / Description	Face Dir	Sign Area (m²)	Comments	Support Area (m²)	Total Height	Max B_Dim
R	10+052		RL	RS		M110	450x450	HALDIMAND COUNTY 32	N	0.20		0.20	450	450

SCALE
N.T.S.

METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

BOREHOLE DATA
STA TO STA
Survey _____ Revised _____

SHEET 26

Peto MacCallum Ltd.
CONSULTING ENGINEERS

GEOTECHNICAL SURVEY DATA	
SURVEY DATE	**TYPE OF SURVEY**
August 2013	Peto MacCallum Ltd. Power Auger, Hand Auger, Coring

NOTES

1. Conditions and pavement depths apply only to the date of survey.
2. The boundaries between the strata have been established only at core/borehole locations. Between cores/boreholes, the boundaries are assumed from geological evidence and may be subject to error.
3. Soils are described according to the MTO Soils Classification System.
4. Abbreviations for boring and test data conform to OPSD 100.060 unless noted below.
5. Dimensions are in metres and/or millimetres unless otherwise shown. Stations in kilometres + metres.

ABBREVIATIONS

EP	Edge of Pavement
SHLD	Shoulder
MSH	Mid Shoulder
SHR	Shoulder Rounding
LSFH	Low Susceptibility to Frost Heave
MSFH	Moderate Susceptibility to Frost Heave
HSFH	High Susceptibility to Frost Heave
w	Water Content
W_L	Liquid Limit
W_P	Plastic Limit
I_P	Plasticity Index = W_L - W_P

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

DRAWING PATH: K:\Drawings\2012\38 (MRC_KIT)\3812001 - TPM Intersection Improvements at 4 locations\Contract Sheets\Highway 3 - Haldimand 56\
DRAWING NAME: 3812001_B01.dwg
DRAWING LAYOUT NAME: 26_B01
LAST UPDATED: Mar 8, 2019-11:29
PRINTED: Mar 8, 2019-11:40

METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

BOREHOLE DATA
STA TO STA
Survey Revised

SHEET 27

Peto MacCallum Ltd.
CONSULTING ENGINEERS

ASPHALT CORING AND UNDERLYING INFORMATION

LOCATION: HIGHWAY 3 AND HALDIMAND ROAD 56 INTERSECTION

DATE OF SURVEY: AUGUST 2013

OFFSET MEASUREMENTS TAKEN FROM: EXISTING CENTRELINE

CORE NO.	STATION	OFFSET DISTANCE (m)	CORE DEPTH (mm)	LIFTS	UNDERLYING BASE TYPE	REMARKS
Highway 3						
1	26+707	2.2 Lt	220	5 MS 40 HL 1 40 MDBC 60 HL 4 50 HL 3 25 HL 3	Pen Mac	Borehole Through Corehole.
2	26+707	3.7 Lt	240+	10 MS 35 HL 1 40 MDBC 55 MDBC 50 HL 3 30 HL 3 20 HL 3	Asph	Borehole Through Corehole. Did Not Recover Entire Asphalt Thickness. Based on Borehole Information Asphalt Is 305 mm Thick.
3	26+800	1.3 Rt	250	5 MS 40 HL 1 60 MDBC 40 HL 4 45 HL 3 25 HL 3 35 HL 3	Pen Mac	Borehole Through Corehole.
4	26+800	3.5 Rt	260	10 MS 40 HL 1 55 MDBC 60 MDBC 35 HL 4 60 HL 4	Gran	Borehole Through Corehole.
5	26+800	4.8 Rt	210	5 MS 55 HL 1 50 MDBC 45 HL 4 55 HL 4	Gran	On Partlally Paved Shoulder.
6	26+890	1.7 Lt	235	40 HL 1 40 MDBC 50 HL 4 35 HL 3 40 HL 3 30 HL 3	Pen Mac	Borehole Through Corehole.
7	26+890	3.3 Lt	175	40 HL 1 40 MDBC 50 HL 4 45 HL 3	Pen Mac	Borehole Through Corehole.
8	26+905	6.3 Lt	160	50 HL 1 35 MDBC 40 HL 4 35 HL 4	Gran	Borehole Through Corehole. On Commercial Entrance.
9	26+925	1.3 Rt	285	50 HL 1 45 MDBC 40 HL 4 20 HL 4 30 HL 3 45 HL 3 55 HL 3	Pen Mac	Borehole Through Corehole. On Left Turn Lane.
10	26+925	4.6 Rt	195	45 HL 1 50 MDBC 40 HL 4 60 HL 4	Gran	Borehole Through Corehole.
11	26+925	10.0 Rt	155	40 HL 1 35 MDBC 15 HL 4 65 HL 4	Gran	Borehole Through Corehole. On Fully Paved Shoulder.

Note: MS = Microsurfacing

ASPHALT CORING AND UNDERLYING INFORMATION

LOCATION: HIGHWAY 3 AND HALDIMAND ROAD 56 INTERSECTION

DATE OF SURVEY: AUGUST 2013

OFFSET MEASUREMENTS TAKEN FROM: EXISTING CENTRELINE

CORE NO.	STATION	OFFSET DISTANCE (m)	CORE DEPTH (mm)	LIFTS	UNDERLYING BASE TYPE	REMARKS
12	26+941	12.9 Rt	130	60 HL 1 30 MDBC 40 HL 4	Gran	Borehole Through Corehole. On Commercial Entrance.
13	26+958	1.3 Lt	210+	40 HL 1 45 MDBC 55 HL 4 25 HL 3 45 HL 3	Asph Over Pen Mac	Borehole Through Corehole. Did Not Recover Entire Asphalt Thickness.
13B	26+958	4.8 Lt	135	35 HL 1 30 MDBC 25 HL 4 45 HL 4	Gran	Borehole Through Corehole. On Fully Paved Shoulder.
14	26+958	7.8 Lt	115	55 HL 1 45 MDBC 15 HL 4	Gran	Borehole Through Corehole. On Commercial Entrance.
16	27+052	1.8 Lt	300	40 HL 1 40 MDBC 30 HL 4 40 HL 4 60 HL 4 45 HL 4 45 HL 3	Pen Mac	Borehole Through Corehole.
15	27+052	4.4 Lt	275	45 HL 1 50 MDBC 45 HL 4 20 HL 4 60 HL 4 55 HL 4	Gran	Borehole Through Corehole. On Right Turn Lane.
17	27+129	1.7 Rt	310	40 HL 1 40 MDBC 55 HL 4 40 HL 4 20 HL 4 45 HL 3 35 HL 3 35 HL 3	Pen Mac	Borehole Through Corehole.
18	27+200	1.9 Lt	300	50 HL 1 45 MDBC 50 HL 4 40 HL 3 40 HL 3 45 HL 3 30 HL 3	Pen Mac	Borehole Through Corehole.
19	27+200	3.4 Lt	180+	50 HL 1 40 MDBC 35 HL 3 55 HL 3	Asph	Borehole Through Corehole. Did Not Recover Entire Asphalt Thickness. Based on Borehole Information Asphalt is 280 mm Thick.
20	27+200	3.8 Lt	140	50 HL 1 45 MDBC 45 HL 3	Gran	On Partially Paved Shoulder.
21	27+325	1.6 Rt	275	45 HL 1 60 MDBC 30 HL 3 30 HL 3 20 HL 3 30 HL 3 40 HL 4 20 HL 3	Pen Mac	Borehole Through Corehole.

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

DRAWING PATH: K:\Drawings\2012_38 (MRC_KIT)\3812001 - TPM Intersection Improvements at 4 locations\Contract Sheets\Highway 3 - Haldimand 56\
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BOREHOLE DATA
STA TO STA
Survey _____ Revised _____

SHEET 28

PMM Peto MacCallum Ltd.
CONSULTING ENGINEERS

ASPHALT CORING AND UNDERLYING INFORMATION

LOCATION: HIGHWAY 3 AND HALDIMAND ROAD 56 INTERSECTION

DATE OF SURVEY: AUGUST 2013

OFFSET MEASUREMENTS TAKEN FROM: EXISTING CENTRELINE

CORE NO.	STATION	OFFSET DISTANCE (m)	CORE DEPTH (mm)	LIFTS	UNDERLYING BASE TYPE	REMARKS
22	27+325	3.0 Rt	260	50 HL 1 85 MDBC 75 HL 4 50 HL 4	Pen Mac	Borehole Through Corehole.
Haldimand Road 56						
23	9+900	3.0 Rt	230+	45 HL 4 45 HL 4 35 HL 4 105 HL 4	Asph	Borehole Through Corehole. Did Not Recover Entire Asphalt Thickness. Based on Borehole Information Asphalt is 290 mm Thick. Bottom Lift is Poor Quality Asphalt.
24	9+935	3.6 Lt	135+	55 HL 4 30 HL 4 50 HL 4	Asph	Borehole Through Corehole. DId Not Recover Entlre Asphalt Thickness. Based on Borehole Information Asphalt is 270 mm Thick. Bottom Lift is Poor Quallty Asphalt.
25	9+950	8.7 Rt	75	35 HL 4 40 HL 4	Gran	Borehole Through Corehole. On Commercial Entrance.
Haldimand Road 32						
26	10+032	2.7 Rt	215	30 HL 1 25 HL 1 60 MDBC 45 HL 3 55 HL 3	Gran	Borehole Through Corehole.
27	10+100	2.8 Lt	230	55 HL 1 45 MDBC 35 HL 3 35 HL 3 60 HL 3	Gran	Borehole Through Corehole.

Note: MS = Microsurfacing

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

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HIGHWAY 3
DATUM: EXISTING CENTRELINE

26+707.0 2.2 Lt C/L ROAD
Borehole Through Corehole
0 – 220 Asph
220 – 550 Pen Mac (Very Slight Hydrocarbon Odour Detected)
550 – 690 Gry Cr Gr Some Sa Tr Si Moist
690 – 1.1 Br Sa And Gr Some Si Moist
1.1 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
26+707.0 3.7 Lt C/L EP
Borehole Through Corehole
0 – 305 Asph
305 – 590 Br Cr Sa And Gr Tr Si Moist
590 – 720 Gry Cr Gr Some Sa Tr Si Moist
720 – 1.2 Br Sa And Gr Some Si Moist
1.2 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
26+707.0 5.5 Lt C/L MSH
0 – 200 Gry Cr Sa And Gr Tr Si Moist
200 – 1.0 Br Sa And Gr Tr Si Moist
1.0 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
26+750.0 8.5 Rt C/L
0 – 180 Dk Br Si(y) Sa Tps Some Si Moist
180 – 410 Br Sa W Gr Some Si Moist
410 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
26+750.0 10.8 Rt C/L
0 – 195 Dk Br Cl W Si Tps Tr Sa Moist
195 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
26+800.0 1.3 Rt C/L ROAD
Borehole Through Corehole
0 – 250 Asph
250 – 410 Pen Mac (Very Slight Hydrocarbon Odour Detected)
410 – 670 Gry Cr Gr Some Sa Tr Si Moist
670 – 810 Br Sa W Gr Some Si Moist
SM
w = 7%
% Pass
26.5 mm = 100
19.0 mm = 100
13.2 mm = 98
9.5 mm = 92
4.75 mm = 72
1.18 mm = 38
300 µm = 24
75 µm = 19
LSFH
NOT Accep GRANULAR B TYPE I
Accep SSM
810 – 1.5 Br/Gry Cl W Si Tr Sa Occ Dk Gry Si(y) Sa Seams Firm Moist
26+800.0 3.5 Rt C/L EP
Borehole Through Corehole
0 – 260 Asph
260 – 790 Br Cr Sa(y) Gr Tr Si Moist
790 – 1.5 Br/Gry Cl W Si Tr Sa Occ Dk Gry Si(y) Sa Seams Firm Moist
w = 23%

HIGHWAY 3
DATUM: EXISTING CENTRELINE (CONTINUED)

26+800.0 7.5 Rt C/L SHR
0 – 750 Br Cr Sa(y) Gr Tr Si Moist
GW–GM
w = 5%
% Pass
26.5 mm = 100
19.0 mm = 97
13.2 mm = 82
9.5 mm = 65
4.75 mm = 49
1.18 mm = 32
300 µm = 18
75 µm = 10
LSFH
Accep GRANULAR A
750 – 1.0 Dk Gry Si(y) Sa Tr Cl Moist
1.0 – 1.5 Br Cl W Si Tr Sa Firm Moist
26+850.0 7.8 Lt C/L
0 – 175 Dk Br Si(y) Sa Tps Tr Gr Moist
175 – 470 Br Sa W Gr Some Si Moist
470 – 1.5 Br Cl W Si Tr Sa Firm Moist
26+850.0 8.9 Lt C/L
0 – 140 Dk Br Cl W Si Tps Tr Sa Moist
140 – 1.5 Br Cl W Si Tr Sa Firm Moist
26+890.0 1.7 Lt C/L ROAD
Borehole Through Corehole
0 – 235 Asph
235 – 530 Pen Mac (Slight Hydrocarbon Odour Detected)
530 – 990 Br Cr Sa And Gr Tr Si Moist
990 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
26+890.0 3.3 Lt C/L EP
Borehole Through Corehole
0 – 175 Asph
175 – 480 Pen Mac (Slight Hydrocarbon Odour Detected)
480 – 890 Br Cr Sa And Gr Tr Si Moist
890 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
26+890.0 6.3 Lt C/L SHR
0 – 780 Br Cr Sa And Gr Tr Si Moist
780 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
26+905.0 6.3 Lt C/L
Borehole Through Corehole. On Commercial Entrance
0 – 160 Asph
160 – 740 Br/Gry Cr Sa And Gr Tr Si Moist
740 NFP Poss Bld

HIGHWAY 3
DATUM: EXISTING CENTRELINE (CONTINUED)

26+925.0 1.3 Rt C/L ROAD
Borehole Through Corehole. On Left Turn Lane
0 – 285 Asph
285 – 430 Pen Mac (Very Slight Hydrocarbon Odour Detected)
430 – 600 Gry Cr Gr Some Sa Tr Si Moist
600 – 850 Br Sa W Gr Some Si Moist
850 – 1.5 Br/Gry Cl W Si Some Gr Tr Sa Firm Moist
CH
w = 35%
% Pass
4.75 mm = 80
2.00 mm = 80
425 µm = 79
75 µm = 77
5 µm = 69
2 µm = 57
LSFH
WL = 72 IP = 42
K Factor = 0.18
26+925.0 4.6 Rt C/L ROAD
Borehole Through Corehole
0 – 195 Asph
195 – 800 Br Cr Gr W Sa Tr Si Moist
GP–GM
w = 4%
% Pass
26.5 mm = 100
19.0 mm = 99
13.2 mm = 86
9.5 mm = 64
4.75 mm = 38
1.18 mm = 19
300 µm = 12
75 µm = 9
LSFH
Accep GRANULAR A
800 – 1.5 Br/Gry Cl W Si Some Gr Tr Sa Firm Moist
26+925.0 10.0 Rt C/L MSH
Borehole Through Corehole. On Fully Paved Shoulder
0 – 155 Asph
155 – 760 Gry Cr Gr W Sa Tr Si Moist
760 – 1.5 Br/Gry Cl W Si Some Gr Tr Sa Occ Dk Gry Si(y) Sa Seams Firm Moist
26+940.0 7.7 Lt C/L
0 – 110 Dk Br Si(y) Sa Tps Tr Gr Moist
110 – 390 Br Sa W Gr Some Si Moist
390 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
26+940.0 8.8 Lt C/L
0 – 090 Dk Br Cl W Si Tps Tr Sa Moist
090 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
w = 25%
Fr Wat @ 1.2

HIGHWAY 3
DATUM: EXISTING CENTRELINE (CONTINUED)

26+941.0 12.9 Rt C/L
Borehole Through Corehole. On Commercial Entrance
0 – 130 Asph
130 – 730 Br Cr Sa And Gr Tr Si Moist
730 – 1.5 Dk Gry Cl W Si Tr Sa Firm Moist–Wet
w = 55%
26+958.0 1.3 Lt C/L ROAD
Borehole Through Corehole
0 – 210 Asph
210 – 530 Asph Over Pen Mac
530 – 910 Br Cr Sa And Gr Tr Si Moist
910 – 1.5 Br Cl W Si Tr Sa Firm–Stiff Moist
w = 22%
26+958.0 4.8 Lt C/L MSH
Borehole Through Corehole. On Fully Paved Shoulder
0 – 135 Asph
135 – 870 Br Cr Sa And Gr Tr Si Moist
870 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
26+958.0 7.8 Lt C/L
Borehole Through Corehole. On Commercial Entrance
0 – 115 Asph
115 – 910 Br/Gry Cr Sa And Gr Tr Si Moist
910 – 1.5 Br Cl W Si Tr Sa Firm–Stiff Moist
26+985.0 10.0 Lt C/L
0 – 050 Br Si(y) Sa Tps W Si Tr Gr Moist
050 – 550 Br Sa And Gr Tr Si Moist
550 – 1.5 Br Cl W Si Tr Sa Firm–Stiff Moist
26+985.0 12.7 Rt C/L
0 – 250 Dk Br Si(y) Sa Tps Tr Gr Moist
250 – 600 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
27+017.0 14.3 Lt C/L
0 – 100 Br Si(y) Sa Tps Tr Gr Moist
100 – 280 Br Si(y) Sa Some Gr Moist
280 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
27+044.0 10.3 Rt C/L
Near Existing Culvert End
0 – 350 Wat
350 – 410 Dk Br F Fib Org M Wet
410 – 790 Br Sa W Gr Some Si Wet
790 NFP Poss Bld
27+045.0 9.2 Lt C/L
0 – 075 Dk Br Si(y) Sa Tps Tr Gr Moist
075 – 470 Br Sa Some Gr Some Si Moist
470 – 1.5 Br/Gry Cl W Si Some Sa Firm–Stiff Moist
27+052.0 1.8 Lt C/L ROAD
Borehole Through Corehole
0 – 300 Asph
300 – 480 Pen Mac (Very Slight Hydrocarbon Odour Detected)
480 – 860 Br/Gry Cr Sa And Gr Tr Si Moist
860 – 1.5 Br Cl W Si Tr Sa Firm–Stiff Moist

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BOREHOLE DATA
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HIGHWAY 3
DATUM: EXISTING CENTRELINE (CONTINUED)

27+052.0 4.4 Lt C/L ROAD
Borehole Through Corehole. On Right Turn Lane
0 – 275 Asph
275 – 930 Br/Gry Cr Sa And Gr Tr Si Moist
930 – 1.5 Br Cl W Si Tr Sa Firm–Stiff Moist
27+052.0 6.0 Lt C/L SHR
0 – 870 Br/Gry Cr Sa And Gr Tr Si Moist
870 – 1.5 Br Cl W Si Tr Sa Firm–Stiff Moist
27+053.0 12.5 Lt C/L
Near Existing Culvert End
0 – 270 Wat
270 – 340 Br/Grn F Fib Org M Wet
340 – 1.5 Br/Gry Cl W Si Some Sa Firm–Stiff Wet
27+100.0 8.6 Rt C/L
0 – 060 Br Si(y) Sa Tps Tr Gr Moist
060 – 410 Br Sa Some Gr Some Si Moist
410 – 1.5 Br/Gry Cl W Si Tr Sa Firm Moist
27+100.0 9.7 Rt C/L
0 – 080 Br Si(y) Sa Tps Some Gr Moist
080 – 1.5 Br/Gry Cl W Si Tr Sa Firm Moist
27+129.0 10.6 Lt C/L
Near Existing Culvert End
0 – 160 Wat
160 – 425 Br/Gry Sa And Gr Some Si Wet
425 – 1.5 Br/Gry Cl W Si Tr Sa Firm Wet
27+129.0 1.7 Rt C/L ROAD
Borehole Through Corehole
0 – 310 Asph
310 – 420 Pen Mac
420 – 580 Gry Cr Gr Some Sa Tr Si Moist
580 – 1.1 Br Sa W Gr Some Si Moist
1.1 – 1.5 Br/Gry Cl W Si Tr Sa Firm Moist
27+129.0 5.6 Rt C/L MSH
0 – 820 Br Cr Sa And Gr Tr Si Moist
820 – 1.5 Br Sa W Gr Tr Si Moist–Wet
Fr Wat @ 1.0
27+129.0 10.2 Rt C/L
Near Existing Culvert End
0 – 210 Wat
210 – 460 Br/Gry Sa And Gr Some Si Tr Org Wet
460 – 1.5 Br/Gry Cl W Si Tr Sa Firm Wet
w = 51%
27+146.0 15.3 Rt C/L
0 – 150 Dk Br Cl W Si Tps Tr Sa Moist
150 – 1.5 Br/Gry Cl W Si Tr Sa Firm Moist
27+150.0 7.7 Lt C/L
0 – 220 Dk Br Si(y) Sa Tps Tr Gr Moist
220 – 610 Br Sa And Gr Some Si Moist
610 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
27+150.0 8.9 Lt C/L
0 – 075 Wat
075 – 300 Dk Br Si(y) Sa Tps Tr Gr Wet
300 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Wet

HIGHWAY 3
DATUM: EXISTING CENTRELINE (CONTINUED)

27+162.0 10.0 Lt C/L
0 – 040 Wat
040 – 230 Dk Br Si(y) Sa Tps Tr Gr Wet
230 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Wet
27+200.0 1.9 Lt C/L ROAD
Borehole Through Corehole
0 – 300 Asph
300 – 530 Pen Mac (Very Slight Hydrocarbon Odour Detected)
530 – 850 Br/Gry Cr Sa And Gr Tr Si Moist
850 – 1.5 Br Cl W Si Tr Sa Firm–Stiff Moist
27+200.0 3.4 Lt C/L EP
Borehole Through Corehole
0 – 280 Asph
280 – 770 Br/Gry Cr Gr W Sa Tr Si Moist
GP–GM
w = 5%
% Pass
26.5 mm = 100
19.0 mm = 97
13.2 mm = 72
9.5 mm = 50
4.75 mm = 30
1.18 mm = 17
300 µm = 9
75 µm = 6
LSFH
NOT Accep GRANULAR A
Accep GRANULAR B TYPE I
770 – 1.5 Br Cl W Si Tr Sa Firm–Stiff Moist
CH
w = 21%
% Pass
4.75 mm = 100
2.00 mm = 99
425 µm = 97
75 µm = 95
5 µm = 86
2 µm = 66
LSFH
WL = 51 IP = 28
K Factor = 0.24
27+200.0 5.1 Lt C/L MSH
0 – 815 Br/Gry Cr Gr W Sa Tr Si Moist
GP–GM
w = 4%
% Pass
26.5 mm = 100
19.0 mm = 99
13.2 mm = 78
9.5 mm = 58
4.75 mm = 38
1.18 mm = 24
300 µm = 14
75 µm = 10
LSFH
Accep GRANULAR A
815 – 1.5 Br Cl W Si Tr Sa Firm–Stiff Moist

HIGHWAY 3
DATUM: EXISTING CENTRELINE (CONTINUED)

27+250.0 7.1 Rt C/L
0 – 210 Dk Br Si(y) Sa Tps Tr Gr Moist
210 – 380 Br Sa W Gr Some Si Moist
380 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
27+250.0 8.7 Rt C/L
0 – 230 Dk Br Si(y) Sa Tps Tr Gr Moist
230 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist–Wet
w = 28%
Fr Wat @ 650
27+325.0 1.6 Rt C/L ROAD
Borehole Through Corehole
0 – 275 Asph
275 – 450 Pen Mac (Slight Hydrocarbon Odour Detected)
450 – 960 Br/Gry Cr Sa And Gr Tr Si Moist
960 – 1.5 Br Cl W Si Tr Sa Firm–Stiff Moist
27+325.0 3.0 Rt C/L EP
Borehole Through Corehole
0 – 260 Asph
260 – 460 Pen Mac (Slight Hydrocarbon Odour Detected)
460 – 910 Br/Gry Cr Sa And Gr Tr Si Moist
910 – 1.5 Br Cl W Si Tr Sa Firm–Stiff Moist
27+325.0 5.1 Rt C/L MSH
0 – 830 Br Cr Sa And Gr Tr Si Moist
830 – 1.5 Br Cl W Si Tr Sa Firm–Stiff Moist

HALDIMAND ROAD 56
DATUM: EXISTING CENTRELINE

09+900.0 3.0 Rt C/L ROAD
Borehole Through Corehole
0 – 290 Asph
290 – 490 Br/Gry Cr Sa And Gr Tr Si Moist
490 – 905 Br Sa Some Gr Tr Si Moist
905 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
09+900.0 6.5 Rt C/L MSH
0 – 760 Br/Gry Cr Sa And Gr Tr Si Moist
760 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
09+933.0 9.3 Lt C/L
Near Existing Culvert End
0 – 340 Wat
340 – 490 Br Sa And Gr Some Si Wet
490 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist–Wet
09+933.0 9.9 Rt C/L
Near Existing Culvert End
0 – 450 Wat
450 – 650 Grn F Fib Org M Wet
650 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist–Wet
09+935.0 3.6 Lt C/L EP
Borehole Through Corehole
0 – 270 Asph
270 – 420 Br/Gry Cr Sa And Gr Tr Si Moist
420 – 790 Br Sa Some Gr Tr Si Moist
790 – 1.5 Dk Gry Cl W Si Tr Sa Firm–Stiff Moist
09+935.0 5.9 Lt C/L SHR
0 – 325 Br/Gry Cr Sa And Gr Tr Si Moist
325 – 800 Br Sa Some Gr Tr Si Moist
800 – 1.1 Dk Gry Cl W Si Tr Sa Firm–Stiff Moist
1.1 NFP Poss Bld
09+950.0 8.7 Rt C/L
Borehole Through Corehole. On Commercial Entrance
0 – 075 Asph
075 – 310 Br/Gry Cr Sa And Gr Tr Si Moist
310 – 810 Dk Br Sa Some Gr Tr Si Moist–Wet
810 – 1.5 Dk Gry Cl W Si Tr Sa Firm Moist–Wet
w = 26%
Fr Wat @ 720

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BOREHOLE DATA
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SHEET 31

Peto MacCallum Ltd.
CONSULTING ENGINEERS

HALDIMAND ROAD 32
DATUM: EXISTING CENTRELINE

10+023.0 15.2 Lt C/L
Near Existing Culvert End
0 – 150 Wat
150 – 230 Grn F Fib Org M Wet
230 – 540 Br/Gry Sa And Gr Tr Si Wet
540 – 1.5 Br/Gry Cl W Si Tr Sa Firm Moist–Wet
10+030.0 8.6 Rt C/L
Near Existing Culvert End
0 – 160 Wat
160 – 250 Grn F Fib Org M Wet
250 – 360 Br/Gry Sa And Gr Tr Si Wet
360 – 1.5 Br/Gry Cl W Si Tr Sa Firm Wet
w = 40%
10+032.0 2.7 Rt C/L EP
Borehole Through Corehole
0 – 215 Asph
215 – 740 Br Cr Sa And Gr Tr Si Moist–Wet
740 – 1.5 Br/Gry Cl W Si Tr Sa Firm Moist–Wet
Fr Wat @ 680
10+032.0 4.6 Rt C/L MSH
0 – 650 Br Cr Sa And Gr Tr Si Moist–Wet
650 – 1.5 Br/Gry Cl W Si Tr Sa Firm Wet
w = 33%
Fr Wat @ 580
10+050.0 7.4 Rt C/L
0 – 280 Dk Br Cl W Si Tps Some Sa Some Gr
Moist
280 – 1.5 Br/Gry Cl W Si Tr Sa Firm–Stiff Moist
10+100.0 2.8 Lt C/L EP
Borehole Through Corehole
0 – 230 Asph
230 – 940 Br Cr Sa And Gr Tr Si Moist
940 – 1.5 Br Cl W Si Some Sa Moist
10+100.0 6.0 Lt C/L SHR
0 – 640 Br Cr Sa And Gr Tr Si Moist
640 – 1.5 Br/Gry Cl W Si Tr Sa Firm Moist

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

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METRIC

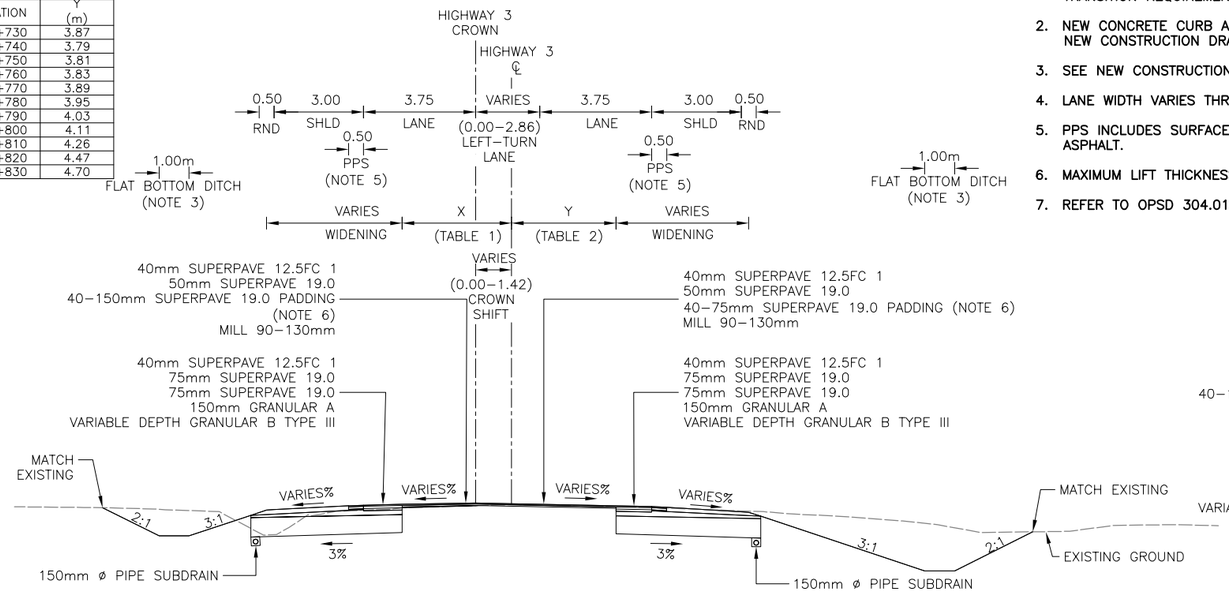
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TYPICAL SECTIONS
STA TO STA
Survey Revised

SHEET 32

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 86-05

TABLE 2 – PAVEMENT WIDENING	
STATION	Y (m)
26+730	3.87
26+740	3.79
26+750	3.81
26+760	3.83
26+770	3.89
26+780	3.95
26+790	4.03
26+800	4.11
26+810	4.26
26+820	4.47
26+830	4.70



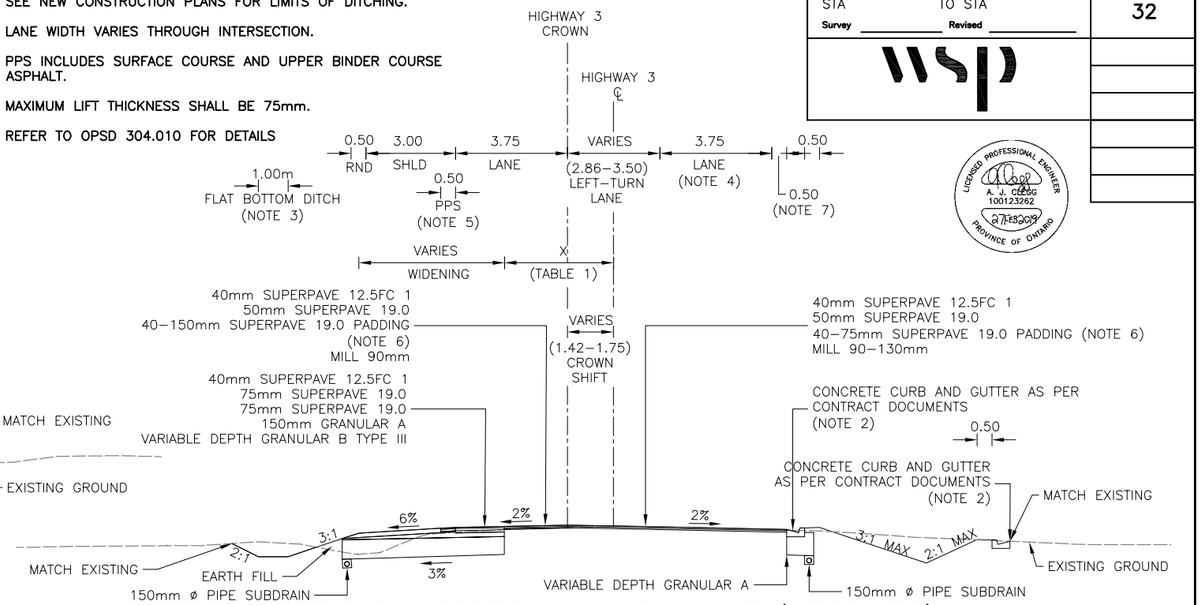
TYPICAL SECTION – HIGHWAY 3 (WEST LEG)

N.T.S.

STA. 26+705 TO STA. 26+840 (NOTE 1)

NOTES:

1. SEE PAVEMENT DATA CHART AND MISCELLANEOUS DETAILS FOR PAVING TRANSITION REQUIREMENTS.
2. NEW CONCRETE CURB AND GUTTER LIMITS AS PER NEW CONSTRUCTION DRAWINGS.
3. SEE NEW CONSTRUCTION PLANS FOR LIMITS OF DITCHING.
4. LANE WIDTH VARIES THROUGH INTERSECTION.
5. PPS INCLUDES SURFACE COURSE AND UPPER BINDER COURSE ASPHALT.
6. MAXIMUM LIFT THICKNESS SHALL BE 75mm.
7. REFER TO OPSD 304.010 FOR DETAILS

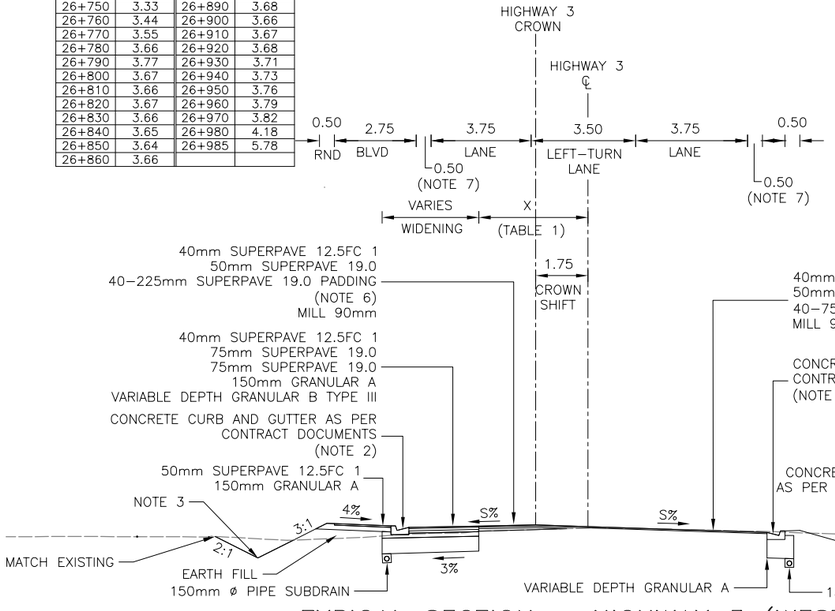


TYPICAL SECTION – HIGHWAY 3 (WEST LEG)

N.T.S.

STA. 26+840 TO STA. 26+890

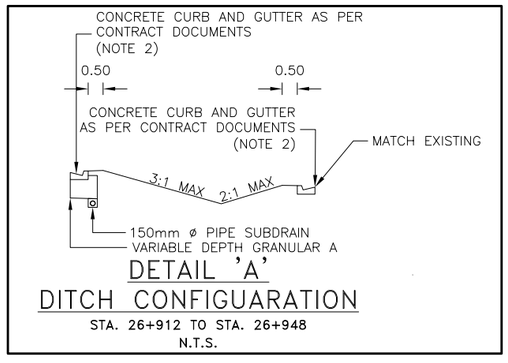
TABLE 1 – PAVEMENT WIDENING			
STATION	X (m)	STATION	X (m)
26+730	3.11	26+860	3.66
26+740	3.22	26+870	3.68
26+750	3.33	26+890	3.68
26+760	3.44	26+900	3.66
26+770	3.55	26+910	3.67
26+780	3.66	26+920	3.68
26+790	3.77	26+930	3.71
26+800	3.67	26+940	3.73
26+810	3.66	26+950	3.76
26+820	3.67	26+960	3.79
26+830	3.66	26+970	3.82
26+840	3.65	26+980	4.18
26+850	3.64	26+985	5.78
26+860	3.66		



TYPICAL SECTION – HIGHWAY 3 (WEST LEG)

N.T.S.

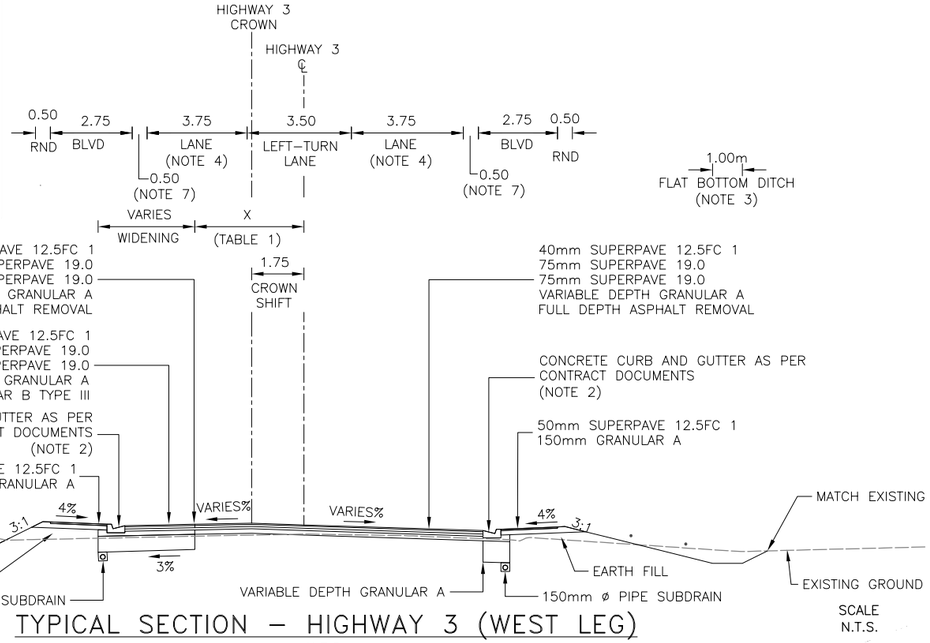
STA. 26+890 TO STA. 26+912



DETAIL 'A' DITCH CONFIGURATION

STA. 26+912 TO STA. 26+948

N.T.S.



TYPICAL SECTION – HIGHWAY 3 (WEST LEG)

N.T.S.

STA. 26+912 TO STA. 27+000

SCALE N.T.S.

METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

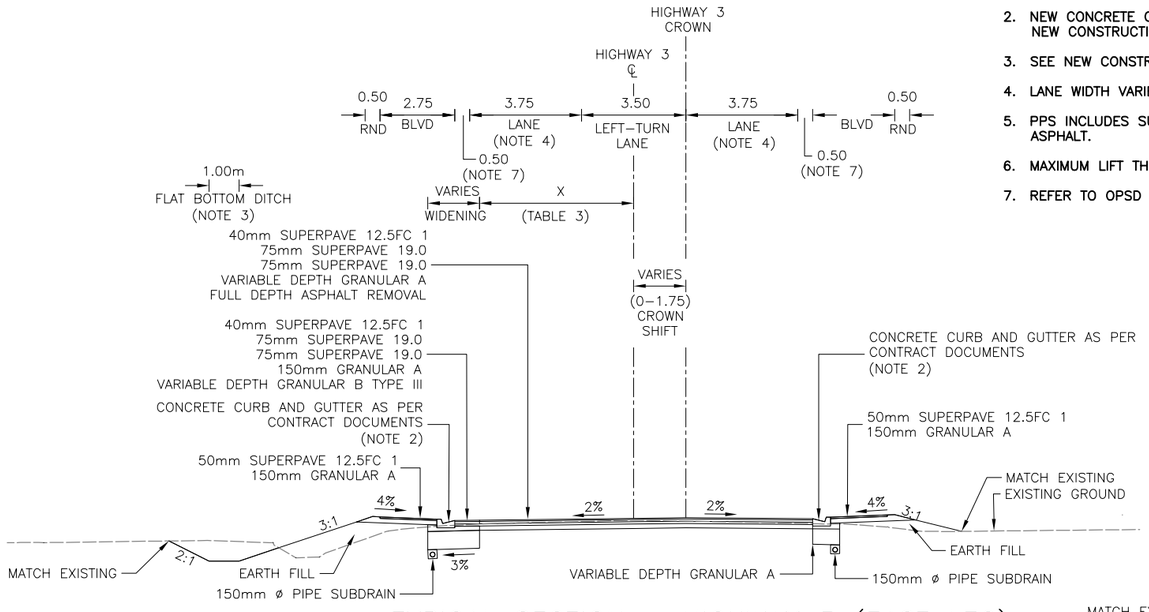
TYPICAL SECTIONS
STA TO STA
Survey Revised

SHEET 33

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

NOTES:

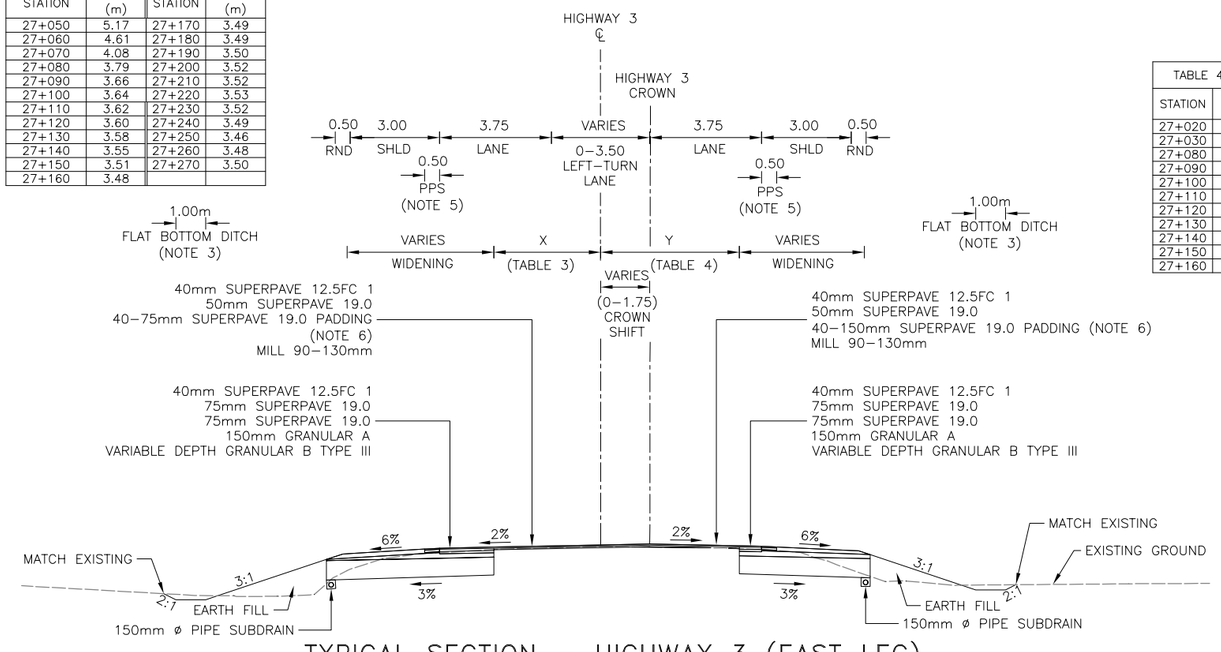
1. SEE PAVEMENT DATA CHART AND MISCELLANEOUS DETAILS FOR PAVING TRANSITION REQUIREMENTS.
2. NEW CONCRETE CURB AND GUTTER LIMITS AS PER NEW CONSTRUCTION DRAWINGS.
3. SEE NEW CONSTRUCTION PLANS FOR LIMITS OF DITCHING.
4. LANE WIDTH VARIES THROUGH INTERSECTION.
5. PPS INCLUDES SURFACE COURSE AND UPPER BINDER COURSE ASPHALT.
6. MAXIMUM LIFT THICKNESS SHALL BE 75mm.
7. REFER TO OPSD 304.010 FOR DETAILS



TYPICAL SECTION – HIGHWAY 3 (EAST LEG)

N.T.S.
STA. 27+000 TO STA. 27+052

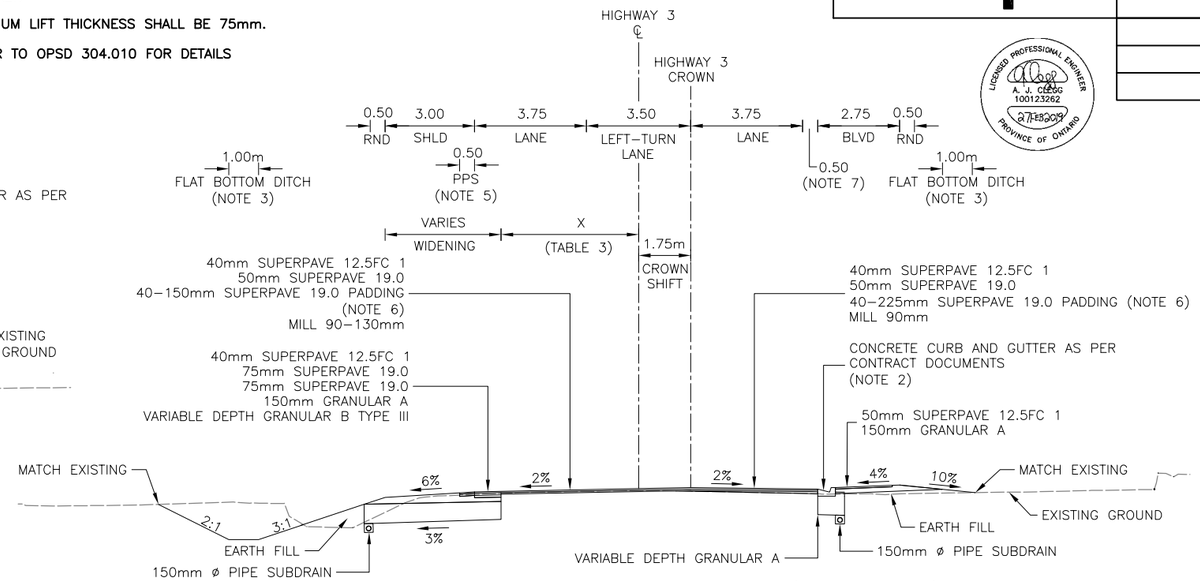
TABLE 3 – PAVEMENT WIDENING			
STATION	X (m)	STATION	X (m)
27+050	5.17	27+170	3.49
27+060	4.61	27+180	3.49
27+070	4.08	27+190	3.50
27+080	3.79	27+200	3.52
27+090	3.66	27+210	3.52
27+100	3.64	27+220	3.53
27+110	3.62	27+230	3.52
27+120	3.60	27+240	3.49
27+130	3.58	27+250	3.46
27+140	3.55	27+260	3.48
27+150	3.51	27+270	3.50
27+160	3.48		



TYPICAL SECTION – HIGHWAY 3 (EAST LEG)

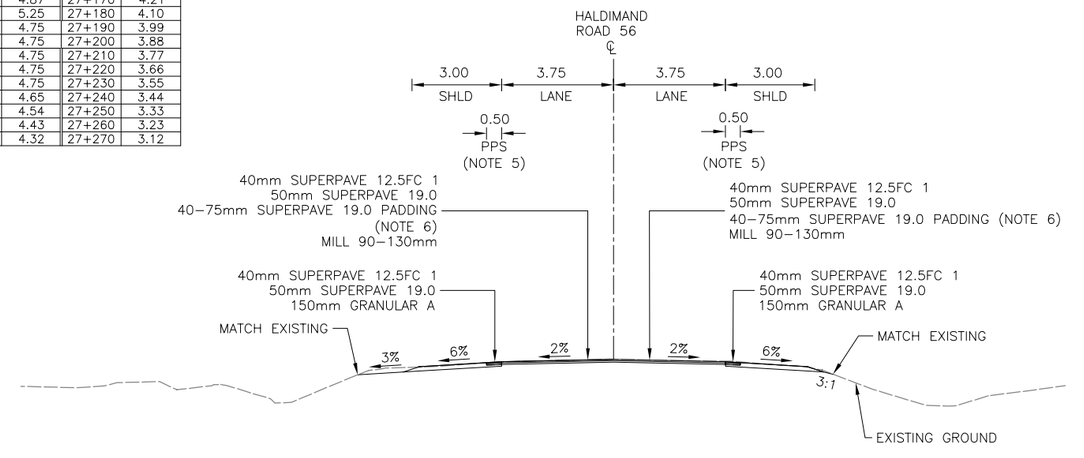
N.T.S.
STA. 27+080 TO STA. 27+281 (NOTE 1)

TABLE 4 – PAVEMENT WIDENING			
STATION	Y (m)	STATION	Y (m)
27+020	4.87	27+170	4.21
27+030	5.25	27+180	4.10
27+080	4.75	27+190	3.99
27+090	4.75	27+200	3.88
27+100	4.75	27+210	3.77
27+110	4.75	27+220	3.66
27+120	4.75	27+230	3.55
27+130	4.65	27+240	3.44
27+140	4.54	27+250	3.33
27+150	4.43	27+260	3.23
27+160	4.32	27+270	3.12



TYPICAL SECTION – HIGHWAY 3 (EAST LEG)

N.T.S.
STA. 27+052 TO STA. 27+080



TYPICAL SECTION – HALDIMAND ROAD 56 (NORTH LEG)

N.T.S.
STA. 9+891 TO STA. 9+927 (NOTE 1)

SCALE
N.T.S.

METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

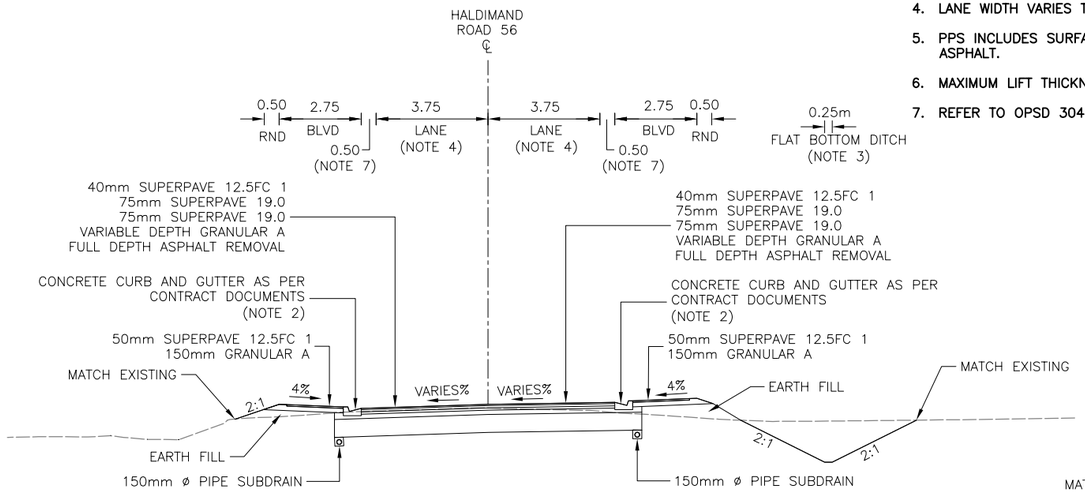
TYPICAL SECTIONS
STA TO STA
Survey _____ Revised _____

SHEET 34

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

NOTES:

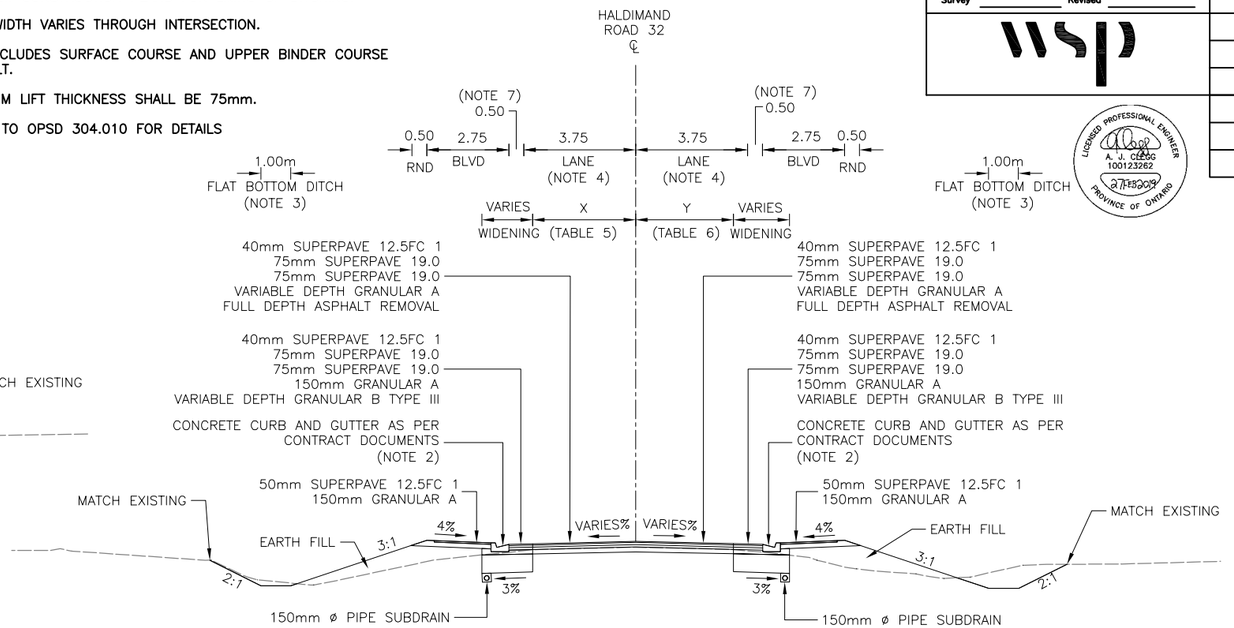
1. SEE PAVEMENT DATA CHART AND MISCELLANEOUS DETAILS FOR PAVING TRANSITION REQUIREMENTS.
2. NEW CONCRETE CURB AND GUTTER LIMITS AS PER NEW CONSTRUCTION DRAWINGS.
3. SEE NEW CONSTRUCTION PLANS FOR LIMITS OF DITCHING.
4. LANE WIDTH VARIES THROUGH INTERSECTION.
5. PPS INCLUDES SURFACE COURSE AND UPPER BINDER COURSE ASPHALT.
6. MAXIMUM LIFT THICKNESS SHALL BE 75mm.
7. REFER TO OPSD 304.010 FOR DETAILS



TYPICAL SECTION – HALDIMAND ROAD 56 (NORTH LEG)

N.T.S.
STA. 9+927 TO STA. 9+994

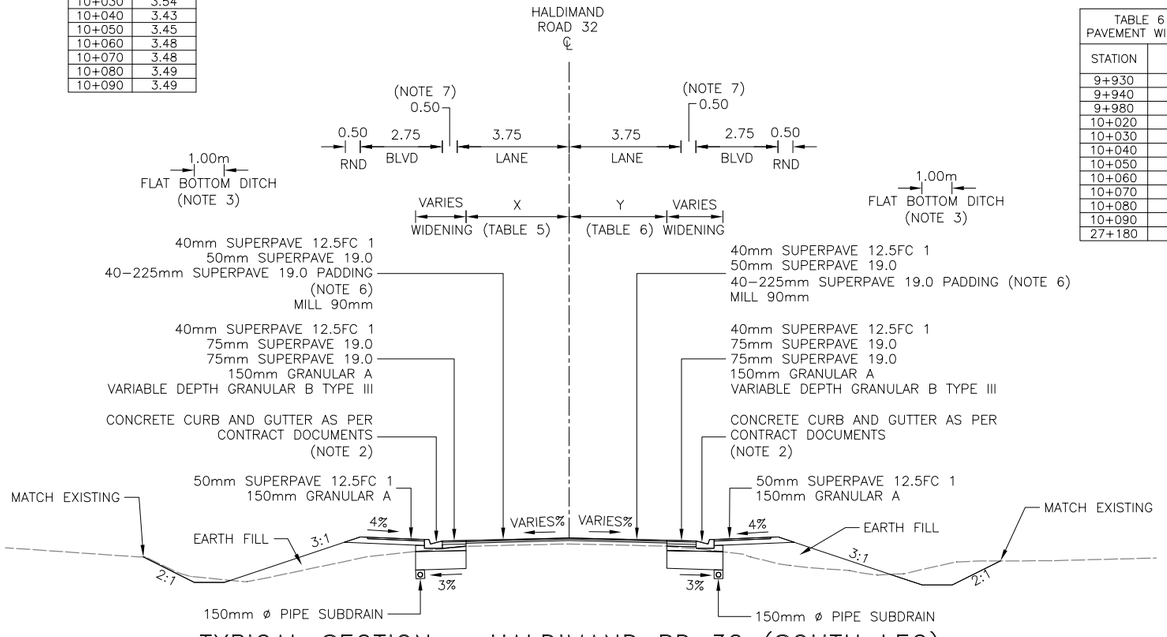
TABLE 5 – PAVEMENT WIDENING	
STATION	X (m)
10+020	3.68
10+030	3.54
10+040	3.43
10+050	3.45
10+060	3.48
10+070	3.48
10+080	3.49
10+090	3.49



TYPICAL SECTION – HALDIMAND RD 32 (SOUTH LEG)

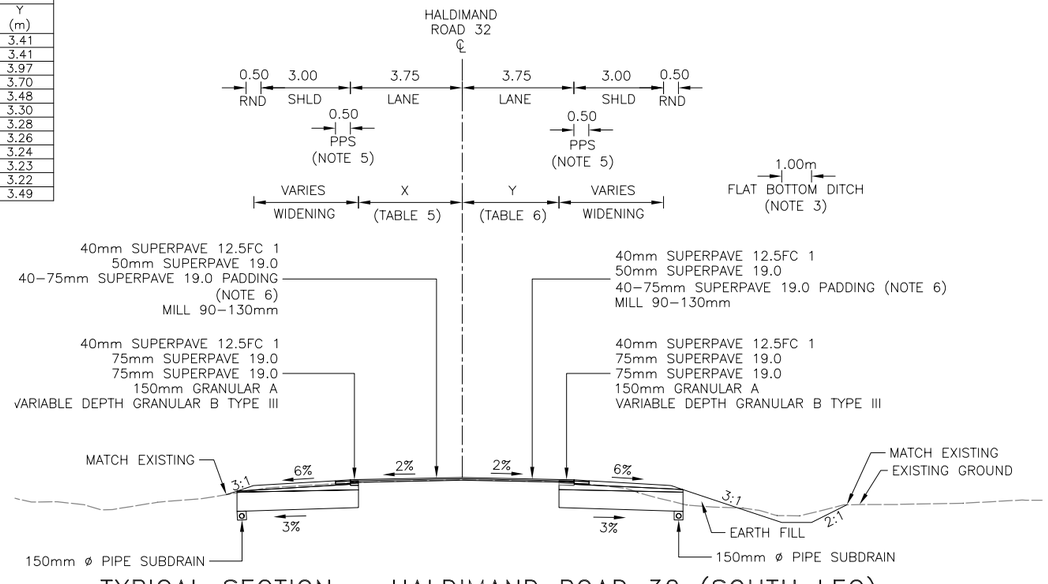
N.T.S.
STA. 10+006 TO STA. 10+043

TABLE 6 – PAVEMENT WIDENING	
STATION	Y (m)
9+930	3.41
9+940	3.41
9+980	3.97
10+020	3.70
10+030	3.48
10+040	3.30
10+050	3.28
10+060	3.26
10+070	3.24
10+080	3.23
10+090	3.22
27+180	3.49



TYPICAL SECTION – HALDIMAND RD 32 (SOUTH LEG)

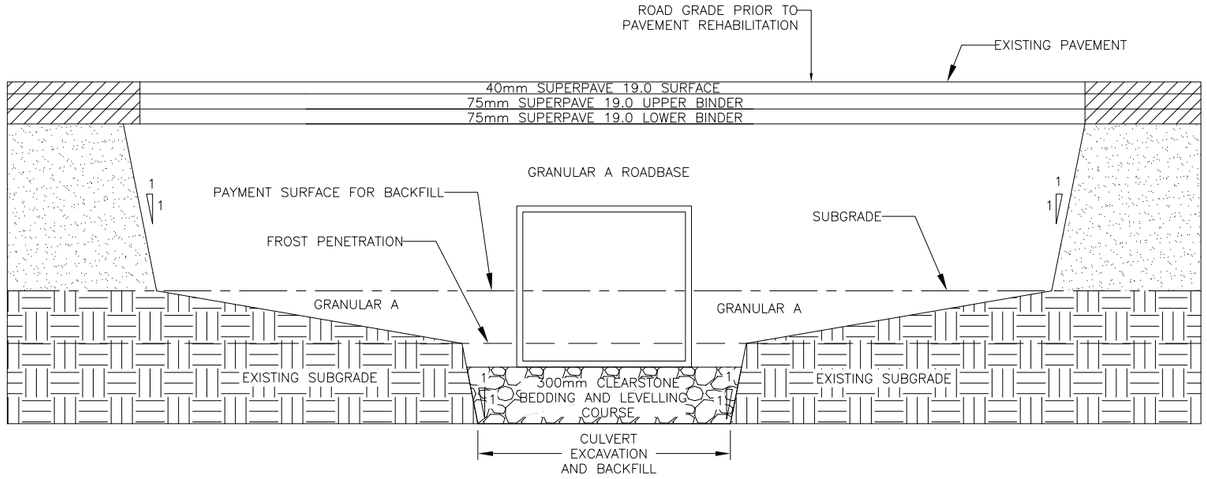
N.T.S.
STA. 10+043 TO STA. 10+065



TYPICAL SECTION – HALDIMAND ROAD 32 (SOUTH LEG)

N.T.S.
STA. 10+065 TO STA. 10+108 (NOTE 1)

SCALE
N.T.S.



OPEN CUT CULVERT/SEWER REPLACEMENT TRENCH REINSTATEMENT DETAIL

N.T.S.

⑥ 27+016 – 27+032

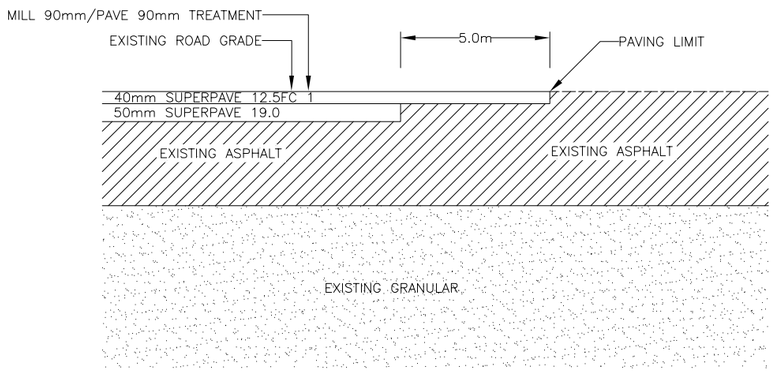
⑧ 27+130

⑩ 9+933

⑫ 10+020 – 10+033

NOTES:

1. BACKFILL AND COVER FOR CONCRETE CULVERTS AS PER OPSD 803.010.

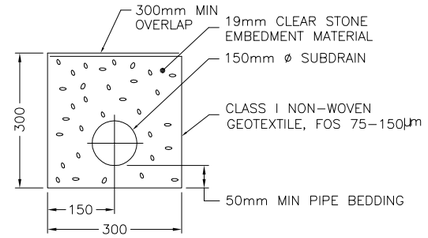


ASPHALT TRANSITION TREATMENT MILL 90mm/PAVE 90mm AT PAVING LIMITS

N.T.S.

STA. 26+705
STA. 27+281
STA. 9+891
STA. 10+108

METRIC



SUBDRAIN PIPE DETAIL

N.T.S.

NOTES:
1. SUBDRAIN PIPE CONNECTION AND OUTLET SHALL BE IN ACCORDANCE WITH OPSD 206.050 AND OPSD 216.021.

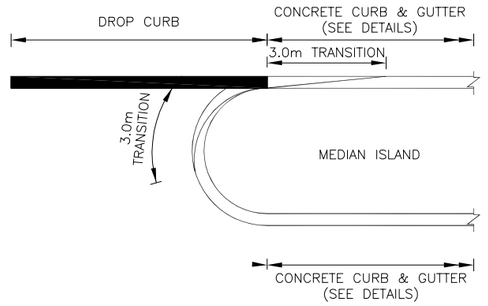
PLATE No
CONT 2019-3006
WP 3056-10-00

DETAILS
STA TO STA
Survey Revised

SHEET 35

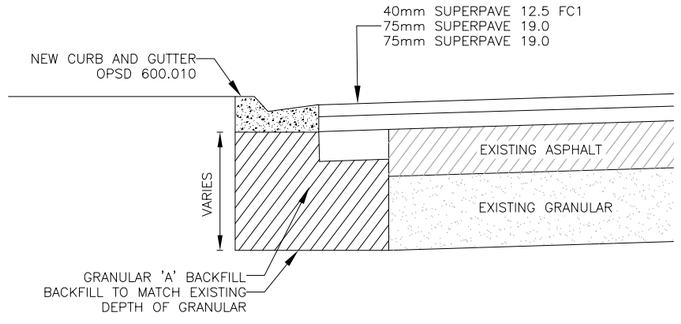
wsp

LICENSED PROFESSIONAL ENGINEER A. J. CLEGG 100123262 PROVINCE OF ONTARIO



DROP CURB TREATMENT AT ENTRANCE 26+856 Rt

N.T.S.



ASPHALT TREATMENT AT NEW CURB AND GUTTER DETAIL

N.T.S.

STA. 26+860 – 26+912 RT (HIGHWAY 3)
STA. 27+038 – 27+044 LT (HIGHWAY 3)
STA. 27+038 – 27+080 RT (HIGHWAY 3)

SCALE
N.T.S.

METRIC

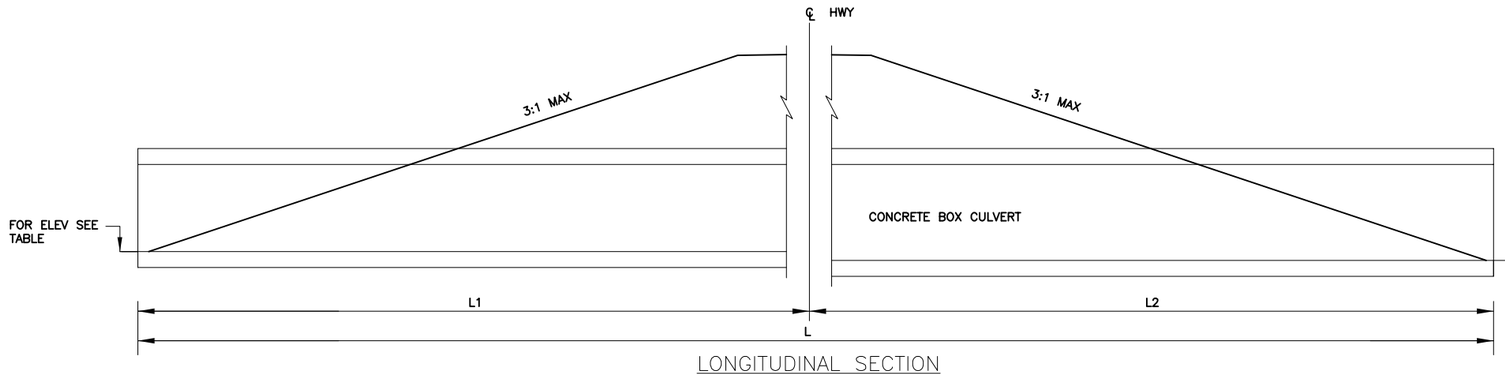
PLATE No
CONT 2019-3006
WP 3056-10-00

DETAILS
STA TO STA
Survey Revised

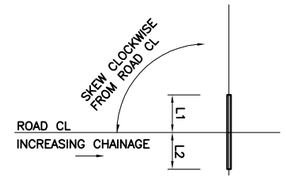
SHEET 36

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

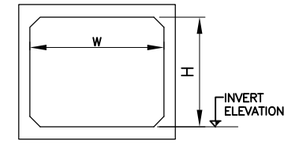
CULVERT No.	HIGHWAY/ROAD	STATION	SKEW	ELEVATION (m)		DIMENSIONS (m)					HEIGHT OF FILL (m)	FROST TREATMENT REQUIRED
				LEFT INVERT	RIGHT INVERT	L	L1	L2	W	H		
6	HIGHWAY 3	27+025.3	116°	190.65	190.75	37.0	16.4	20.6	1.8	0.9	0.52	Y
8	HIGHWAY 3	27+129.5	90°	189.98	190.31	25.6	13.2	12.4	1.8	0.9	0.60	Y
10	HALDIMAND ROAD 56	9+932.8	90°	190.44	190.46	24.5	12.2	12.3	1.8	0.9	0.67	Y
12	HALDIMAND ROAD 32	10+026.2	65°	190.61	190.71	31.7	16.2	15.5	1.8	0.9	0.60	Y



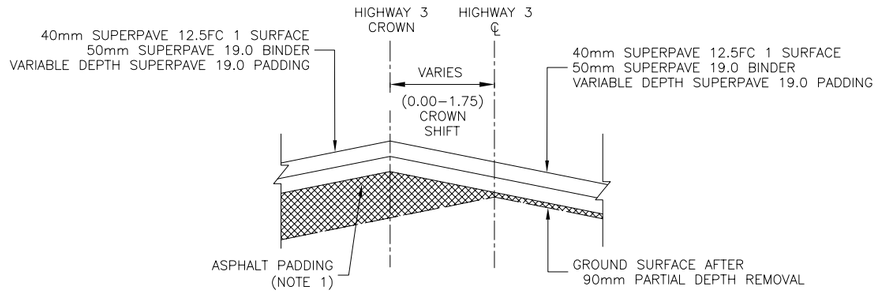
LONGITUDINAL SECTION



SKEW DETAIL
NTS

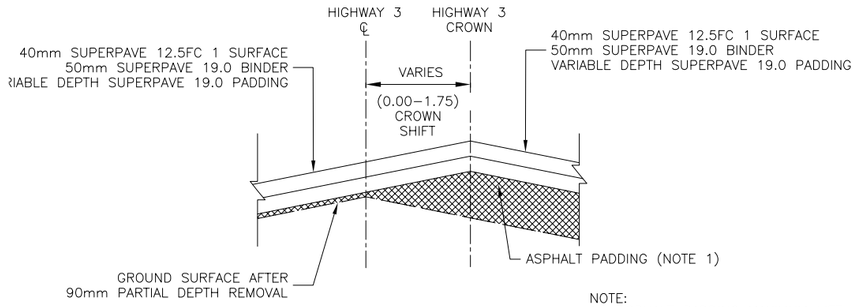


TYPICAL SECTION



NOTE:
1. ASPHALT PADDING MAXIMUM LIFT THICKNESS SHALL BE 75mm

ASPHALT PADDING DETAIL
HIGHWAY 3 WEST
N.T.S.



NOTE:
1. ASPHALT PADDING MAXIMUM LIFT THICKNESS SHALL BE 75mm

ASPHALT PADDING DETAIL
HIGHWAY 3 EAST
N.T.S.

SCALE
N.T.S.

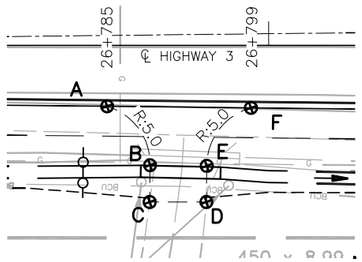
METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

DETAILS
STA TO STA
Survey Revised

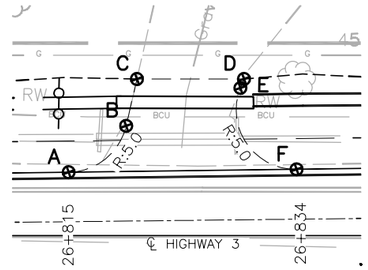
SHEET 37

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05



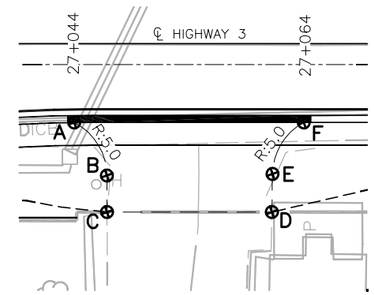
LAYOUT POINTS – ENTRANCE AT STA. 26+792 RT		
POINT	NORTHING	EASTING
A	4758963.692	282682.623
B	4758960.122	282687.573
C	4758957.182	282688.498
D	4758958.657	282693.013
E	4758961.548	282692.103
F	4758967.309	282694.114

LAYOUT DETAIL
ENTRANCE AT STA. 26+792 RT
N.T.S.



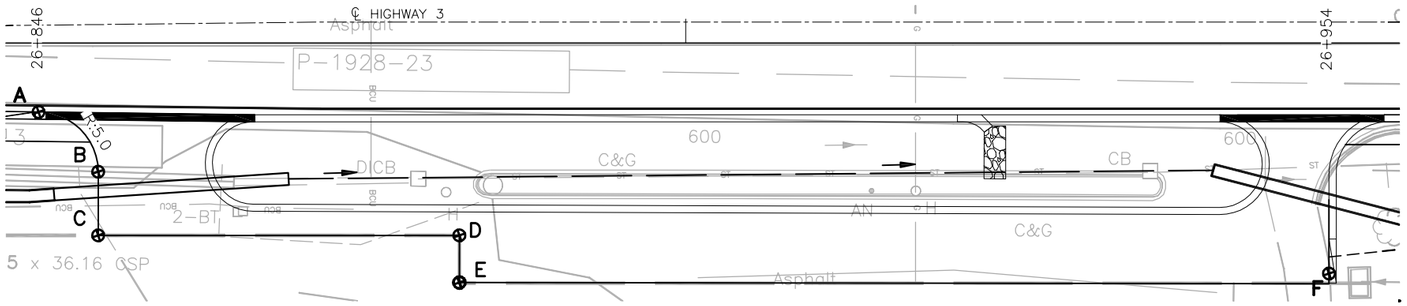
LAYOUT POINTS – ENTRANCE AT STA. 26+826 LT		
POINT	NORTHING	EASTING
A	4758982.554	282706.888
B	4758987.740	282710.262
C	4758991.750	282709.900
D	4758994.536	282718.423
E	4758993.729	282718.373
F	4758988.719	282724.956

LAYOUT DETAIL
ENTRANCE AT STA. 26+826 LT
N.T.S.



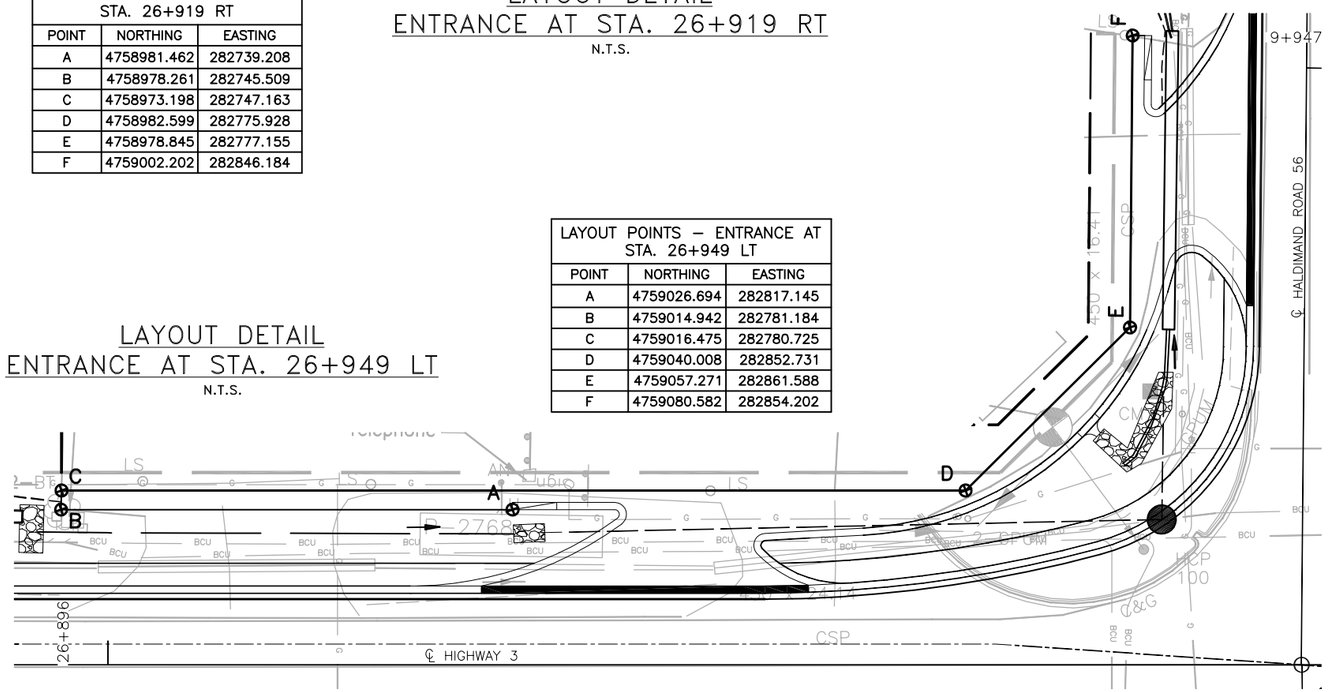
LAYOUT DETAIL
ENTRANCE AT STA. 27+054 RT
N.T.S.

LAYOUT POINTS – ENTRANCE AT STA. 27+054 RT		
POINT	NORTHING	EASTING
A	4759042.355	282928.207
B	4759038.986	282932.185
C	4759036.084	282933.146
D	4759040.373	282946.269
E	4759043.421	282945.329
F	4759048.338	282946.483



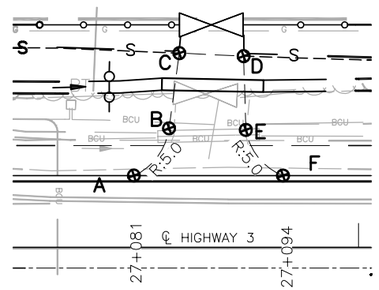
LAYOUT DETAIL
ENTRANCE AT STA. 26+919 RT
N.T.S.

LAYOUT POINTS – ENTRANCE AT STA. 26+919 RT		
POINT	NORTHING	EASTING
A	4758981.462	282739.208
B	4758978.261	282745.509
C	4758973.198	282747.163
D	4758982.599	282775.928
E	4758978.845	282777.155
F	4759002.202	282846.184



LAYOUT DETAIL
ENTRANCE AT STA. 26+949 LT
N.T.S.

LAYOUT POINTS – ENTRANCE AT STA. 26+949 LT		
POINT	NORTHING	EASTING
A	4759026.694	282817.145
B	4759014.942	282781.184
C	4759016.475	282780.725
D	4759040.008	282852.731
E	4759057.271	282861.588
F	4759080.582	282854.202



LAYOUT DETAIL
ENTRANCE AT STA. 27+088 LT
N.T.S.

LAYOUT POINTS – ENTRANCE AT STA. 27+088 LT		
POINT	NORTHING	EASTING
A	4759065.792	282959.328
B	4759070.463	282960.897
C	4759076.710	282959.764
D	4759078.141	282964.961
E	4759072.329	282967.050
F	4759069.670	282971.194

SCALE
N.T.S.

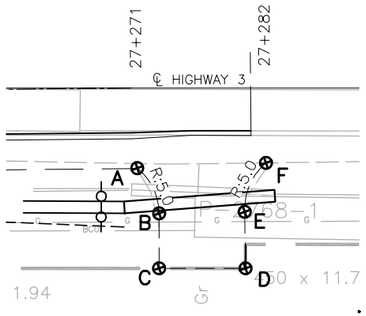
METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

DETAILS
STA TO STA
Survey Revised

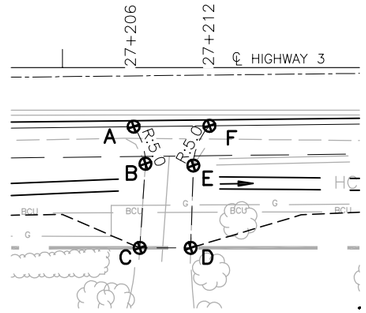
SHEET 38

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 86-05



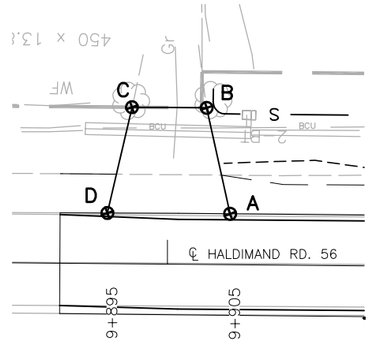
LAYOUT DETAIL
ENTRANCE AT STA. 27+278 RT
N.T.S.

LAYOUT POINTS – ENTRANCE AT STA. 27+278 RT		
POINT	NORTHING	EASTING
A	4759112.702	283143.796
B	4759109.670	283146.715
C	4759105.296	283148.143
D	4759107.544	283155.022
E	4759112.024	283153.486
F	4759116.469	283153.907



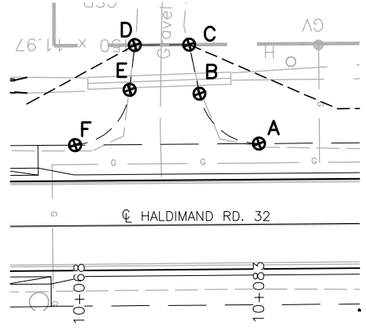
LAYOUT DETAIL
ENTRANCE AT STA. 27+209 RT
N.T.S.

LAYOUT POINTS – ENTRANCE AT STA. 27+209 RT		
POINT	NORTHING	EASTING
A	4759094.132	283081.318
B	4759091.492	283083.226
C	4759084.647	283084.961
D	4759085.971	283089.013
E	4759092.593	283087.084
F	4759096.170	283087.329



LAYOUT DETAIL
ENTRANCE AT STA. 9+900 LT
N.T.S.

LAYOUT POINTS – ENTRANCE AT STA. 9+900 LT		
POINT	NORTHING	EASTING
A	4759126.499	282859.431
B	4759131.116	282867.257
C	4759137.081	282865.367
D	4759136.289	282856.310

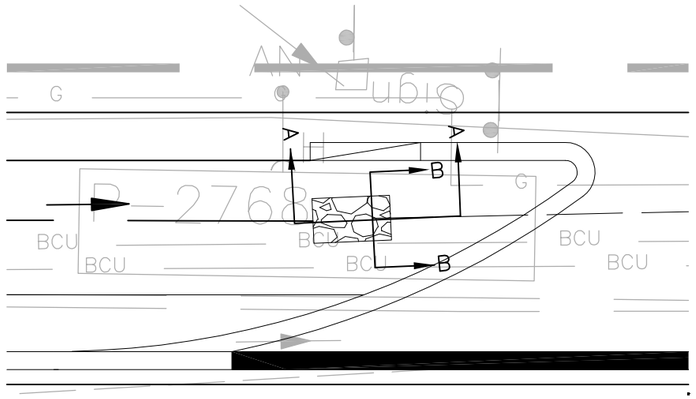


LAYOUT DETAIL
ENTRANCE AT STA. 10+075 LT
N.T.S.

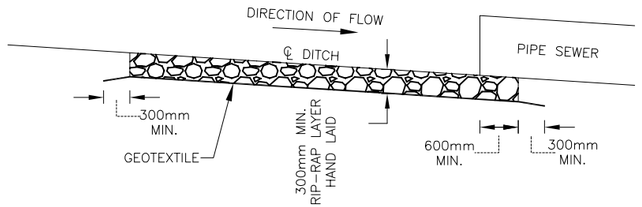
LAYOUT POINTS – ENTRANCE AT STA. 10+075 LT		
POINT	NORTHING	EASTING
A	4758957.964	282916.995
B	4758963.998	282919.424
C	4758966.096	282923.056
D	4758970.410	282921.608
E	4758969.656	282917.919
F	4758972.559	282912.098

SCALE
N.T.S.

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

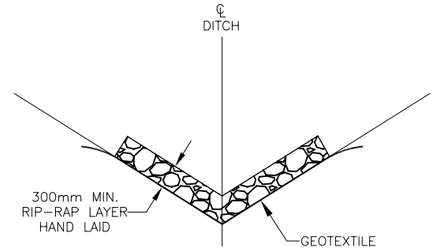


RIP-RAP LAYOUT AT SEWER PIPE INLET
N.T.S.



SECTION A-A
N.T.S.

METRIC



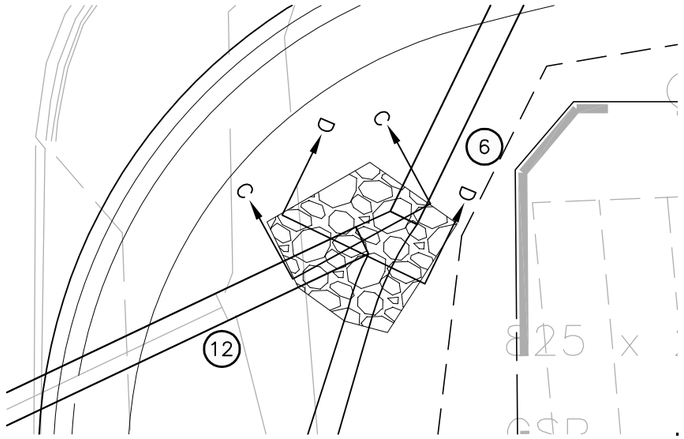
SECTION B-B
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PLATE No
CONT 2019-3006
WP 3056-10-00

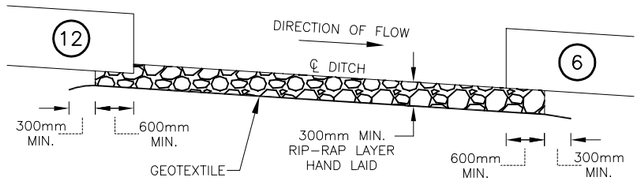
DETAILS
STA TO STA
Survey Revised

SHEET 39

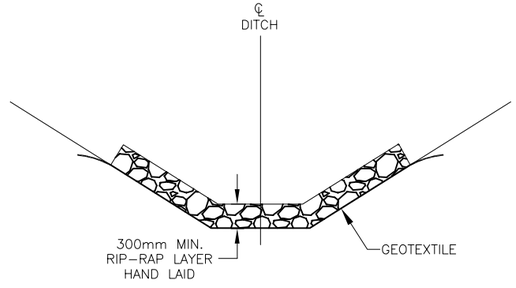
LICENSED PROFESSIONAL ENGINEER
A. J. CASSG
100123362
27 FEB 2019
PROVINCE OF ONTARIO



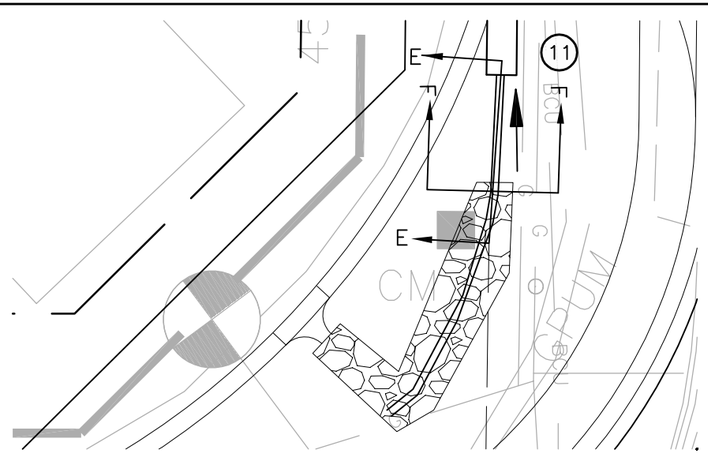
RIP-RAP LAYOUT AT CULVERT 6
AND CULVERT 12
N.T.S.



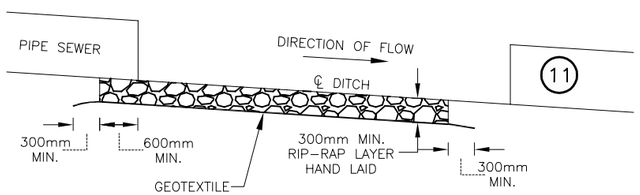
SECTION C-C
N.T.S.



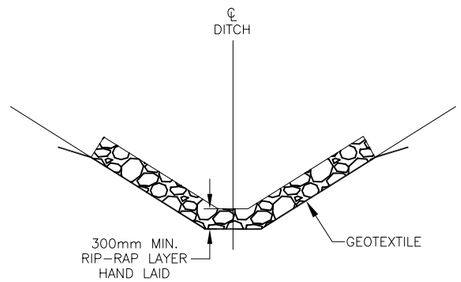
SECTION D-D
N.T.S.



RIP-RAP LAYOUT AT PIPE SEWER OUTLET
AND CULVERT 11
N.T.S.



SECTION E-E
N.T.S.



SECTION F-F
N.T.S.

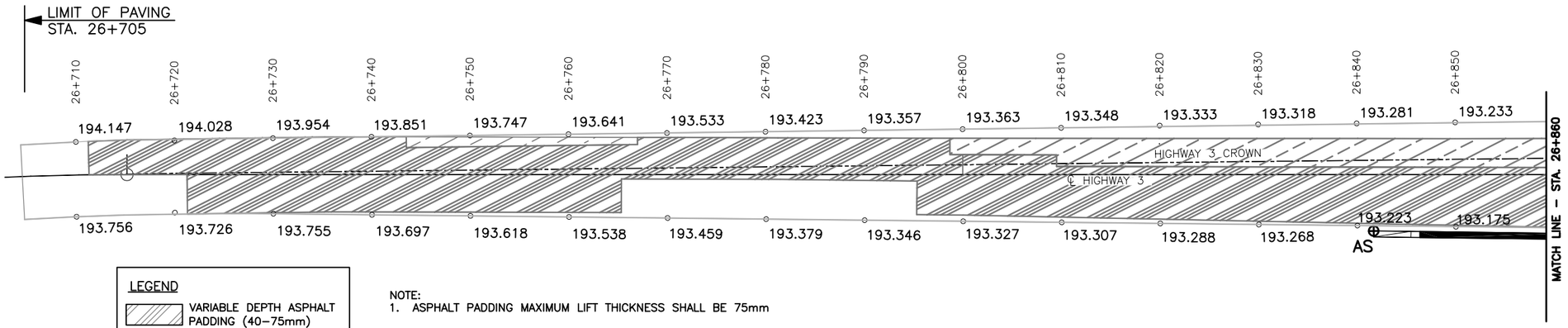
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METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

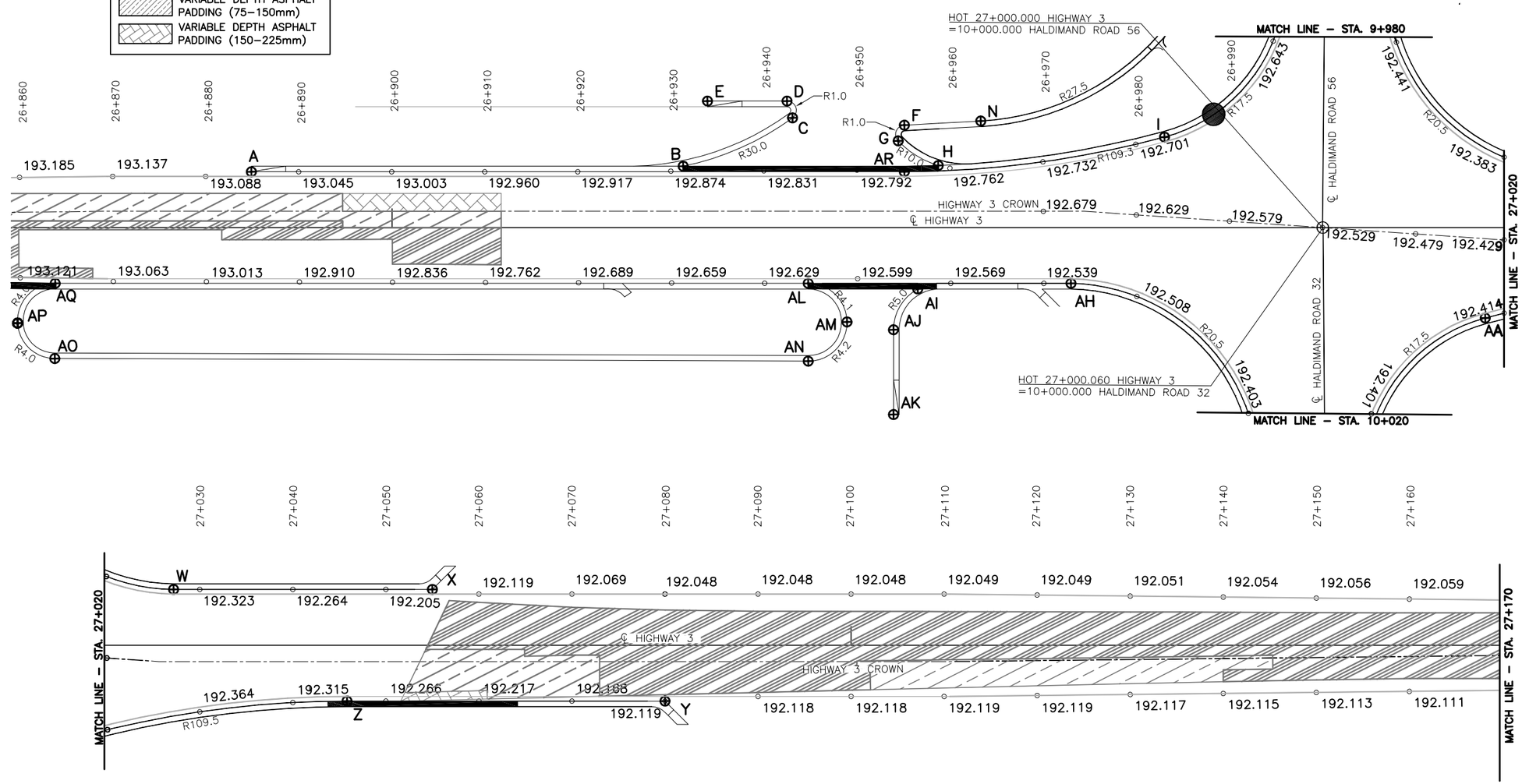
PAVEMENT ELEVATIONS
STA 26+705 TO STA 27+170
Survey _____ Revised _____

SHEET 40



LEGEND
- VARIABLE DEPTH ASPHALT PADDING (40–75mm)
- VARIABLE DEPTH ASPHALT PADDING (75–150mm)
- VARIABLE DEPTH ASPHALT PADDING (150–225mm)

NOTE:
1. ASPHALT PADDING MAXIMUM LIFT THICKNESS SHALL BE 75mm



CURB AND GUTTER LAYOUT POINTS			
POINT	NORTHING	EASTING	ELEVATIONS
A	4759004.806	282772.720	193.067
B	4759019.793	282818.646	192.894
C	4759028.386	282826.207	192.603
D	4759029.920	282825.084	192.458
E	4759027.264	282816.958	192.378
F	4759031.374	282837.875	192.674
G	4759029.560	282837.765	192.812
H	4759028.381	282842.685	192.781
I	4759038.838	282864.845	192.692
N	4759034.351	282845.545	192.754
W	4759049.012	282907.984	192.340
X	4759057.653	282934.424	192.162
Y	4759054.013	282961.915	192.119
Z	4759043.398	282929.435	192.286
AA	4759031.049	282903.658	192.427
AH	4759020.765	282860.182	192.530
AI	4759015.079	282844.713	192.607
AJ	4759010.098	282843.602	192.483
AK	4759001.433	282846.434	192.369
AL	4759011.989	282833.336	192.636
AM	4759009.341	282838.589	192.577
AN	4759004.039	282835.932	192.302
AO	4758979.150	282758.875	192.687
AP	4758981.529	282753.898	192.829
AQ	4758986.850	282756.406	193.101
AR	4759026.606	282839.424	192.777
AS	4758980.251	282735.310	193.204

SCALE
2.5m 0 5m
Horizontal

LICENSED PROFESSIONAL ENGINEER
A. J. CASG
100123262
27-Feb-2019
PROVINCE OF ONTARIO

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

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LAST UPDATED: Mar 8, 2019–11:29
PRINTED: Mar 8, 2019–11:41

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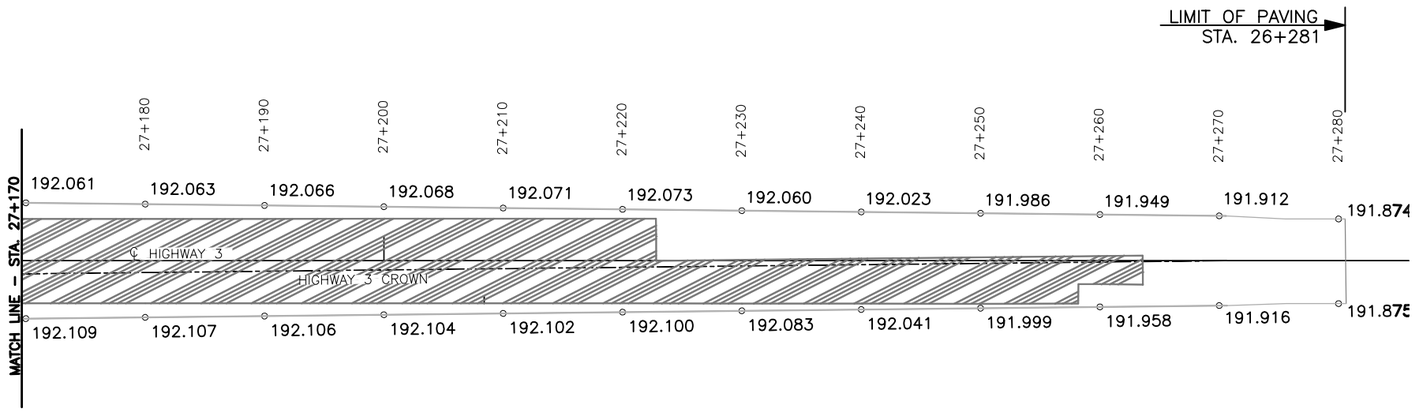
PLATE No
CONT 2019-3006
WP 3056-10-00

PAVEMENT ELEVATIONS
STA 27+170 TO STA 27+281
Survey _____ Revised _____

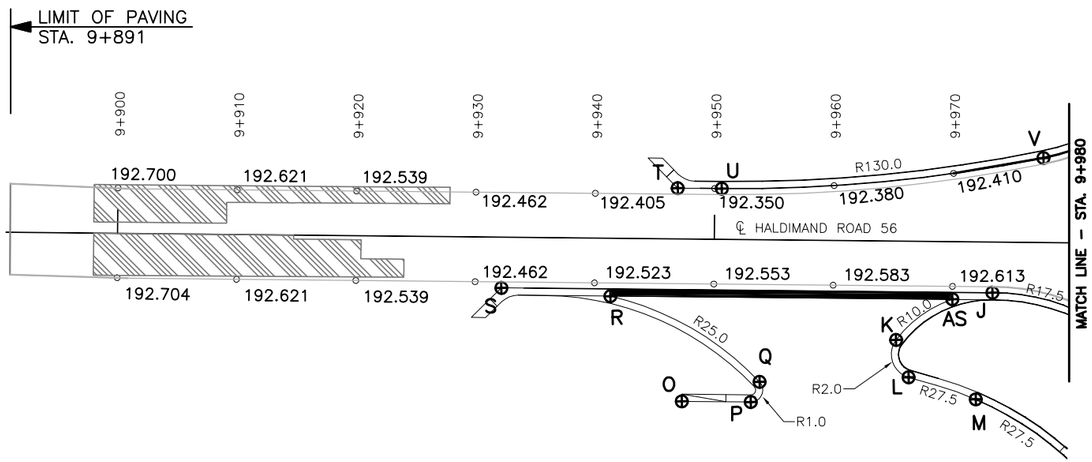
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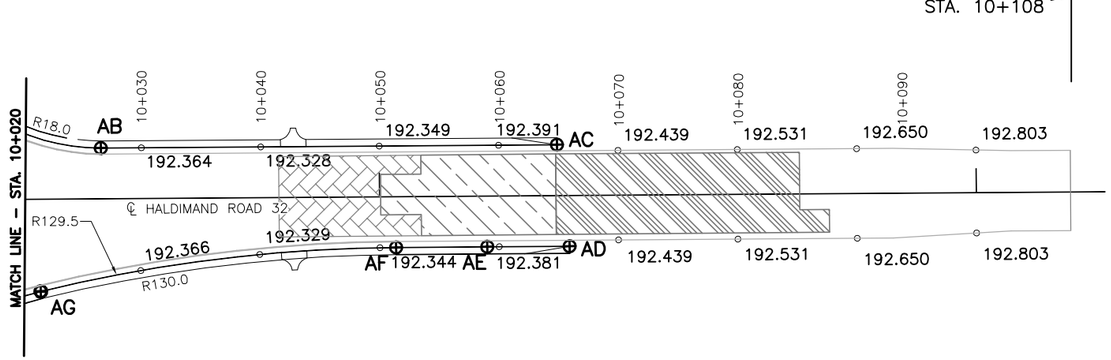
wsp

LEGEND
- VARIABLE DEPTH ASPHALT PADDING (20-50mm)
- VARIABLE DEPTH ASPHALT PADDING (50-100mm)
- VARIABLE DEPTH ASPHALT PADDING (100-200mm)



CURB AND GUTTER LAYOUT POINTS			
POINT	NORTHING	EASTING	ELEVATION
J	4759058.983	282871.908	192.623
K	4759065.416	282865.636	192.563
L	4759063.449	282862.985	192.168
M	4759057.524	282862.986	192.108
O	4759080.884	282855.155	191.917
P	4759075.373	282856.901	191.977
Q	4759075.198	282858.734	192.112
R	4759089.310	282861.669	192.551
S	4759098.208	282859.479	192.466
T	4759086.771	282872.020	192.367
U	4759083.244	282873.138	192.352
V	4759058.436	282883.966	192.434
AB	4759010.952	282896.579	192.376
AC	4758974.717	282908.747	192.415
AD	4758971.060	282900.999	192.416
AE	4758977.602	282898.804	192.377
AF	4758984.841	282896.375	192.349
AG	4759011.983	282883.603	192.697
AS	4759062.004	282870.344	192.638





SCALE
2.5m 0 5m
Horizontal

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

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LAST UPDATED: Mar 8, 2019-11:29
PRINTED: Mar 8, 2019-11:41

METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

TRAFFIC SIGNAL LAYOUT
HIGHWAY 3 AT HALDIMAND ROAD 32/56

SHEET 42

Survey _____ Revised _____

wsp

LICENCED PROFESSIONAL ENGINEER
K. S. KANG
02/26/2019
PROVINCE OF ONTARIO

NOTE(S):

1. STUB UP 50mm CONDUIT AT HYDRO POLE, 300mm ABOVE FINISHED GRADE. LEAVE 15.0m LENGTH OF FEEDER CABLES COILED AT BASE OF POLE. SUPPLY 12.0m OF 50mm RISER CONDUIT, SERVICE ENTRANCE FITTING AND INCLUDING ALL NECESSARY MOUNTING HARDWARE TO HYDRO ONE. HYDRO ONE FORCES TO COMPLETE RISER INSTALLATION ON HYDRO POLE, AND TERMINATE AND ENERGIZE THE FEEDERS. COORDINATE WORK WITH HYDRO ONE.
2. INSTALL 3-75mm SLEEVES IN THE FOOTING.

HALDIMAND ROAD 56
HALDIMAND ROAD 32
HIGHWAY 3
HIGHWAY 3
HOT 27+000 Highway 3 =
10+000 Haldimand Road 56
26+860
26+950
9+950
27+050
27+150
10+050
P1
P2
P3
P4
P5
P6
P7
P8
P9
HH1
HH2
HH3
HH4
HH5
HH6
HH7
HH8
HH9
EHP1
TC1
UPS 1
SUPPLY 'A',100A
120/240V,1ø,3W
TYPE 1 METERED
NOTE 1
NOTE 2
NOTE 2
HCA
MH
CB
DICB
HP
LS
BT
BF
GV
WF
SCALE
2.5m 0 5.0m
Horizontal

MINISTRY OF TRANSPORTATION, ONTARIO PR-5-707 88-05

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DRAWING NAME: 37-EJ381200I-TS1-HWY 3.DWG REVISED BY=K. GILL
DRAWN By: K. GILL MODIFIED: 17/04/25 14:48:13 Revised

METRIC

GENERAL NOTE(S):

A. ALL LOOPS TO BE CENTERED IN LANE.

B. LOOPS TO BE INSTALLED IN UPPER BINDER COURSE PRIOR TO FINAL PAVING.

PLATE No

CONT 2019-3006

WP 3056-10-00

LOOP DETECTOR LAYOUT

HIGHWAY 3 AT HALDIMAND ROAD 32/56

Survey _____ Revised _____

SHEET 43

wsp

LICENSED PROFESSIONAL ENGINEER
K. S. KANG
02/26/2019
PROVINCE OF ONTARIO

HALDIMAND ROAD 56

HIGHWAY 3

HIGHWAY 3

LD2

2.3m

12.0m

LD3

1.0m

10m

4.5m

2.3m

PROJECTED EDGE OF THROUGH LANE

1.8m

1.8m

LD1

125m FROM STOP BAR

PROJECTED EDGE OF THROUGH LANE

2.3m

4.5m

LD6

10.0m

UPS

TC1

UPS 1

1.0m

12.0m

2.3m

LD5

HALDIMAND ROAD 32

LD4

1.8m

1.8m

125m FROM STOP BAR

SCALE

2.5m 0 5.0m

Horizontal

MINISTRY OF TRANSPORTATION, ONTARIO PIN-0-707 88-05

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DRAWN BY: K. GILL MODIFIED: 17/04/24 16:04:45 Revised

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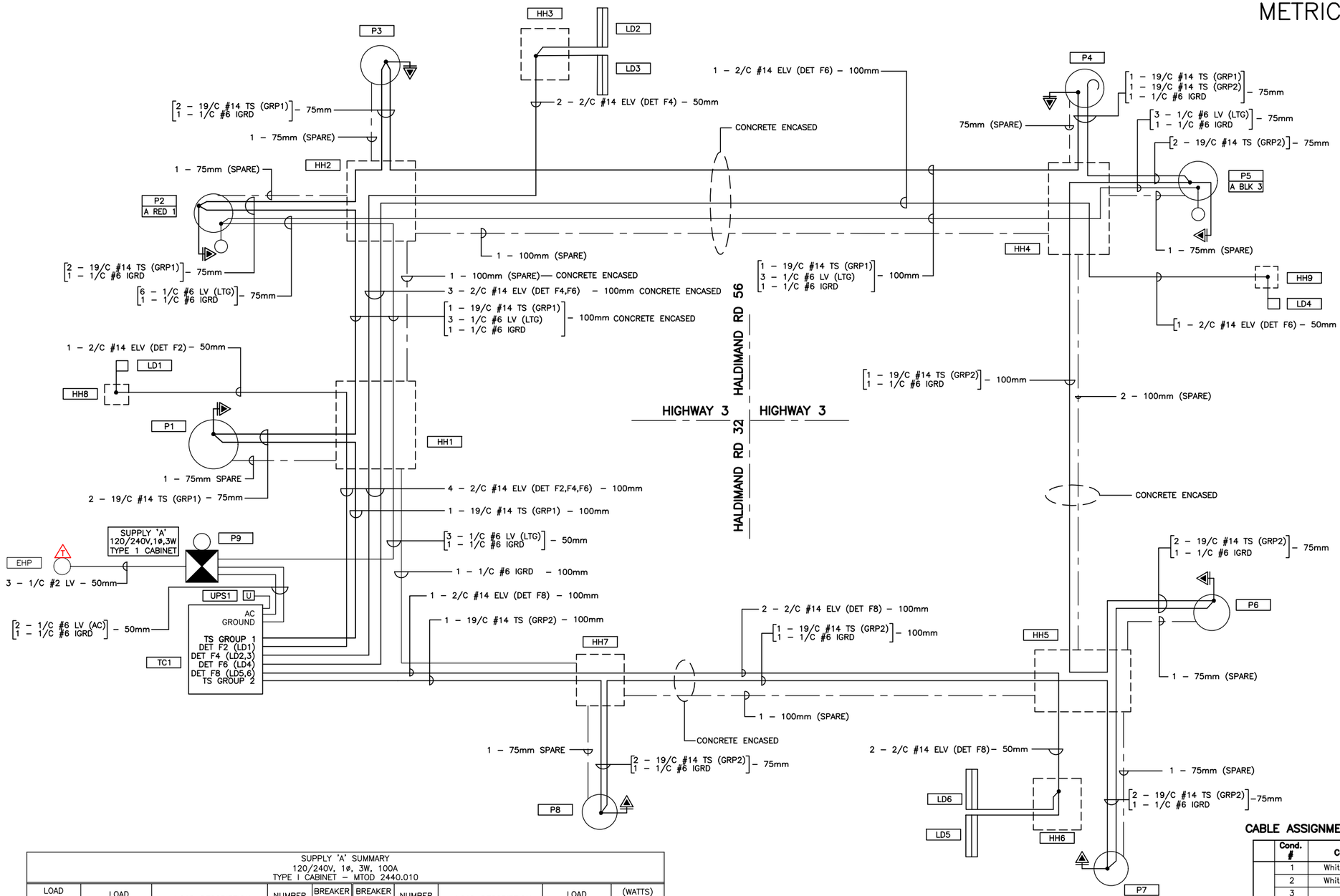
PLATE No
CONT 2019-3006
WP 3056-10-00

TRAFFIC SIGNAL WIRING
HIGHWAY 3 AT HALDIMAND ROAD 32/56

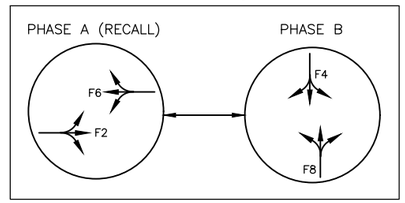
SHEET 44

wsp

LICENCED PROFESSIONAL ENGINEER
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02/26/2019
PROVINCE OF ONTARIO



PHASE SEQUENCE



SUPPLY 'A' SUMMARY 120/240V, 1ø, 3W, 100A TYPE 1 CABINET – MTOD 2440.010									
LOAD (WATTS) SUB–TOTAL	LOAD (WATTS)	LOAD DESCRIPTION	NUMBER CIRCUIT	BREAKER AMPERE RATING	BREAKER AMPERE RATING	NUMBER CIRCUIT	LOAD DESCRIPTION	LOAD (WATTS)	(WATTS) LOAD SUB–TOTAL
480	(8X10W)+ 400W	TRAFFIC SIGNALS – 8 VEHICLE HEADS – CABINET	RED	60					
LIGHTING PANELBOARD									
137	1 x 137	P2	A RED 1	30A	30A	A RED 2	SPARE	–	–
137	1 x 137	P5	A BLK 3	30A	30A	A BLK 4	SPARE	–	–
–	–	SPACE	A RED 5	–	–	A RED 6	SPACE	–	–
–	–	SPACE	A BLK 7	–	–	A BLK 8	SPACE	–	–
SUB TOTAL RED PHASE = 617 W SUB TOTAL BLACK PHASE = 137 W TOTAL LOAD = 754 W									

EXTRA LOW VOLTAGE LOOP DETECTOR TABLE

AMPLIFIER					DETECTION DEVICE					INPUT FILE TERMINAL NO.
DETECTION DEVICE NO	FAZE NO.	SLOT NO.	MODEL NO.	CHANNEL NO.	SIMPLE LOOP	DUPLEX LOOP	SIZE OF LOOP (m)	NO. OF TURNS	INDUCTANCE (uH)	
LD1	2	I2	222	Upper	x		1.8 x 1.8	4	118	T2 – 4 & 5
LD2	4	I6	222	Upper		x	12.0 x 2.3	2–4–2	338	T6 – 4 & 5
LD3	4	I7	222	Upper		x	9.6 x 2.3	2–4–2	275	T7 – 4 & 5
LD4	6	J2	222	Lower	x		1.8 x 1.8	4	118	T1 – 4 & 5
LD5	8	J6	222	Upper		x	12.0 x 2.3	2–4–2	338	T6 – 4 & 5
LD6	8			Lower		x	9.6 x 2.3	2–4–2	275	T6 – 6 & 7

CABLE ASSIGNMENT FOR PEDESTRIAN AND TRAFFIC SIGNAL HEADS

	Cond. #	Colour/Mark	Cable Group 1	Cable Group 2
19/C #14	1	White/White One	Main Rd. Neutral	Main Rd. Neutral
	2	White/White Two	Side Rd. Neutral	Side Rd. Neutral
	3	Black	Spare	Spare
	4	Orange	Spare	Spare
	5	Red/Red One	Main Rd. Red–F6	Main Rd. Red–F2
	6	Red/Red Two	Spare	Spare
	7	Red/Red Three	Side Rd. Red–F8	Side Rd. Red–F4
	8	Red/Red Four	Spare	Spare
	9	Red/Red Five	Spare	Spare
	10	Yellow/Amber One	Main Rd. Amber–F6	Main Rd. Amber–F2
	11	Yellow/Amber Two	Spare	Spare
	12	Yellow/Amber Three	Side Rd. Amber–F8	Side Rd. Amber–F4
	13	Yellow/Amber Four	Spare	Spare
	14	Yellow/Amber Five	Spare	Spare
	15	Blue/Green One	Main Rd. Green–F6	Main Rd. Green–F2
	16	Blue/Green Two	Spare	Spare
	17	Blue/Green Three	Side Rd. Green–F8	Side Rd. Green–F4
	18	Blue/Green Four	Spare	Spare
	19	Blue/Green Five	Spare	Spare

N.T.S.

MINISTRY OF TRANSPORTATION, ONTARIO PR–D–707 88–05

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DRAWN BY: K. GILL MODIFIED: 17/04/25 15:53:1 Revised

METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

TEMPORARY ELECTRICAL WORK
HIGHWAY 3 AT HALDIMAND ROAD 32.56

SHEET 45

Survey _____ Revised _____

wsp

LICENCED PROFESSIONAL ENGINEER
K. S. KANG
02/26/2019
PROVINCE OF ONTARIO

GENERAL NOTE(S):

A. FLASHER BEACONS AND ILLUMINATION TO BE KEPT IN OPERATION AT ALL TIMES UNTIL THE NEW TRAFFIC SIGNALS ARE ENERGIZED.

B. PERMANENT EQUIPMENT SHOWN HERE SHALL BE CONSTRUCTED IN ADVANCE AND MADE READY FOR OPERATION FOR USE DURING TEMPORARY WORK

NOTE(S):

1. INSTALL TEMPORARY POLE TP1 AND RELOCATE FLASHER MECHANISM AND LUMINAIRE AND BRACKET FROM THE EXISTING POLE TO TP1.
2. DISCONNECT EXISTING STEEL MESSENGER AND OTHER CABLES FROM EXISTING POLE. SPLICE ADDITIONAL STEEL MESSENGER AND CABLES AND ATTACH TO TEMPORARY POLE TP1.

HALDIMAND ROAD 56

HALDIMAND ROAD 32

HIGHWAY 3

HIGHWAY 3

26+950

9+950

27+050

27+10

10+050

NOTE 2

TP NOTE 1

EHP1

SUPPLY 'A',100A
120/240V,1ø,3W
TYPE 1 METERED

DICB

BHB

SCALE
2.5m 0 5.0m
Horizontal

MINISTRY OF TRANSPORTATION, ONTARIO PR-5-707 88-05

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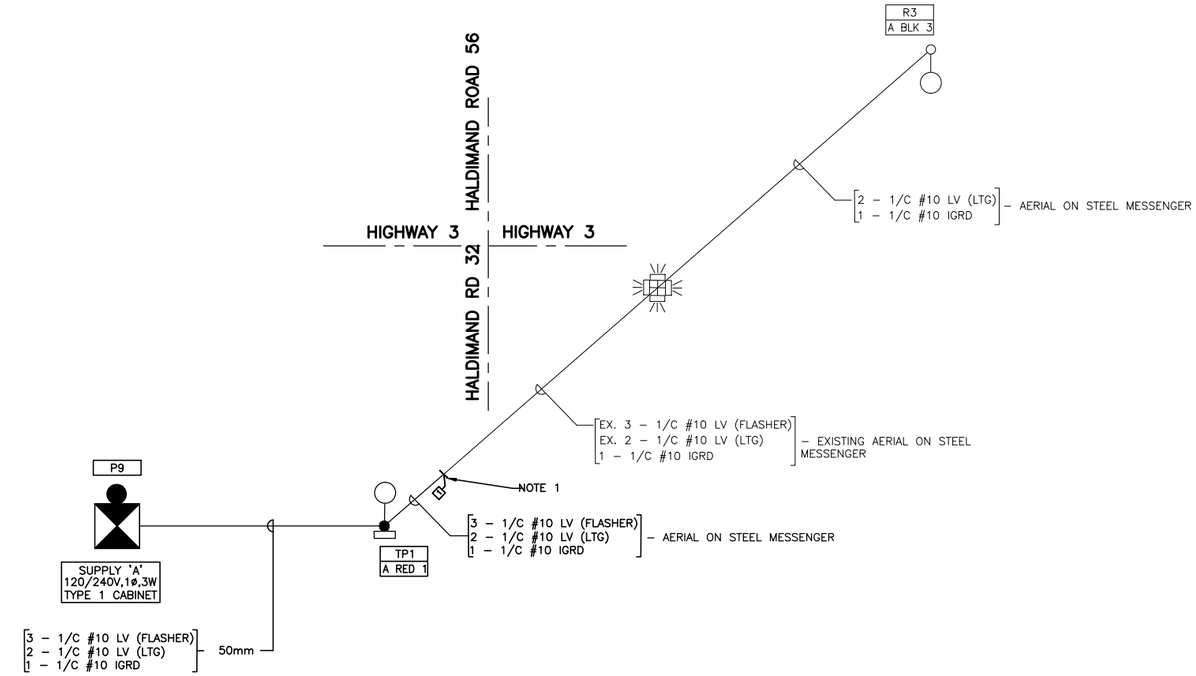
PLATE No
CONT 2019-3006
WP 3056-10-00

TEMPORARY WIRING DIAGRAM
HIGHWAY 3 AT HALDIMAND ROAD 32/56

SHEET 46

wsp

LICENSED PROFESSIONAL ENGINEER
K. S. KING
PROVINCE OF ONTARIO



GENERAL NOTE(S):

A. PERMANENT EQUIPMENT SHOWN ON THIS DRAWING SHALL BE CONSTRUCTED IN ADVANCE AND MADE READY FOR USE DURING TEMPORARY WORK.

NOTE(S):

1. SPLICE TEMPORARY CABLES TO EXISTING CABLES.

SUPPLY 'A' SUMMARY
120/240V, 1ø, 3W, 100A
TYPE I CABINET – MTOD 2440.010

LOAD (WATTS) SUB-TOTAL	LOAD (WATTS)	LOAD DESCRIPTION	NUMBER CIRCUIT	BREAKER AMPERE RATING	BREAKER AMPERE RATING	NUMBER CIRCUIT	LOAD DESCRIPTION	LOAD (WATTS)	(WATTS) LOAD SUB-TOTAL
–	–	–	RED	60					
LIGHTING PANELBOARD									
137	1 x 137	TP1	A RED 1	30A	30A	A RED 2	SPARE	–	–
137	1 x 137	R3	A BLK 3	30A	30A	A BLK 4	SPARE	–	–
50	(4 x 10) + 10	TRAFFIC SIGNAL –4 FLASHER BEACONS –FLASHER MECHANISM	A RED 5	30	–	A RED 6	SPACE	–	–
–	–	SPACE	A BLK 7	–	–	A BLK 8	SPACE	–	–

SUB TOTAL RED PHASE = 617 W
SUB TOTAL BLACK PHASE = 137 W
TOTAL LOAD = 324 W

N.T.S.

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

FILE LOCATION-S:\DATA\2012\38120010200 - MTO - INTERSECTION IMPROVEMENTS WEST REGION\HWY 3-CR56\
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DRAWN BY: K. GILL MODIFIED: 17/04/25 15:54:4 Revised

METRIC

PLATE No
CONT 2019-3006
WP 3056-10-00

ELECTRICAL REMOVALS
HIGHWAY 3 AT HALDIMAND ROAD 32/56

SHEET 47

Survey _____ Revised _____

wsp

LICENCED PROFESSIONAL ENGINEER
K. S. KANG
02/26/2019
PROVINCE OF ONTARIO

GENERAL NOTE(S):

A. FLASHER BEACONS AND ILLUMINATION TO BE KEPT IN OPERATION AT ALL TIMES UNTIL THE NEW TRAFFIC SIGNALS ARE ENERGIZED.

NOTE(S):

1. LUMINAIRE, BRACKET, AND FLASHER MECHANISM TO BE SALVAGE AND REINSTALLED FOR TEMPORARY STAGING

HALDIMAND ROAD 56

HALDIMAND ROAD 32

HIGHWAY 3

HIGHWAY 3

B Store

Canopy over Gas Pumps

Kiosk

B Restaurant

BHB

BHB

Garden RW

Telephone

Sign

Sign

NOTE 1

R1

R2

R3

TSA

TSA

TSA

TSA

LS/H

GPUM

2 GPUM

WF

WF

SRW

DICB

CB

CB

BT

BT

BF

GV

FS

26+950

9+950

27+050

27+100

10+050

SCALE
2.5m 0 5.0m
Horizontal

MINISTRY OF TRANSPORTATION, ONTARIO PIR-D-707 88-05

FILE LOCATION-S:\DATA\2012\38120O1.200 - MTO - INTERSECTION IMPROVEMENTS WEST REGION\HWY 3-CR56\
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