

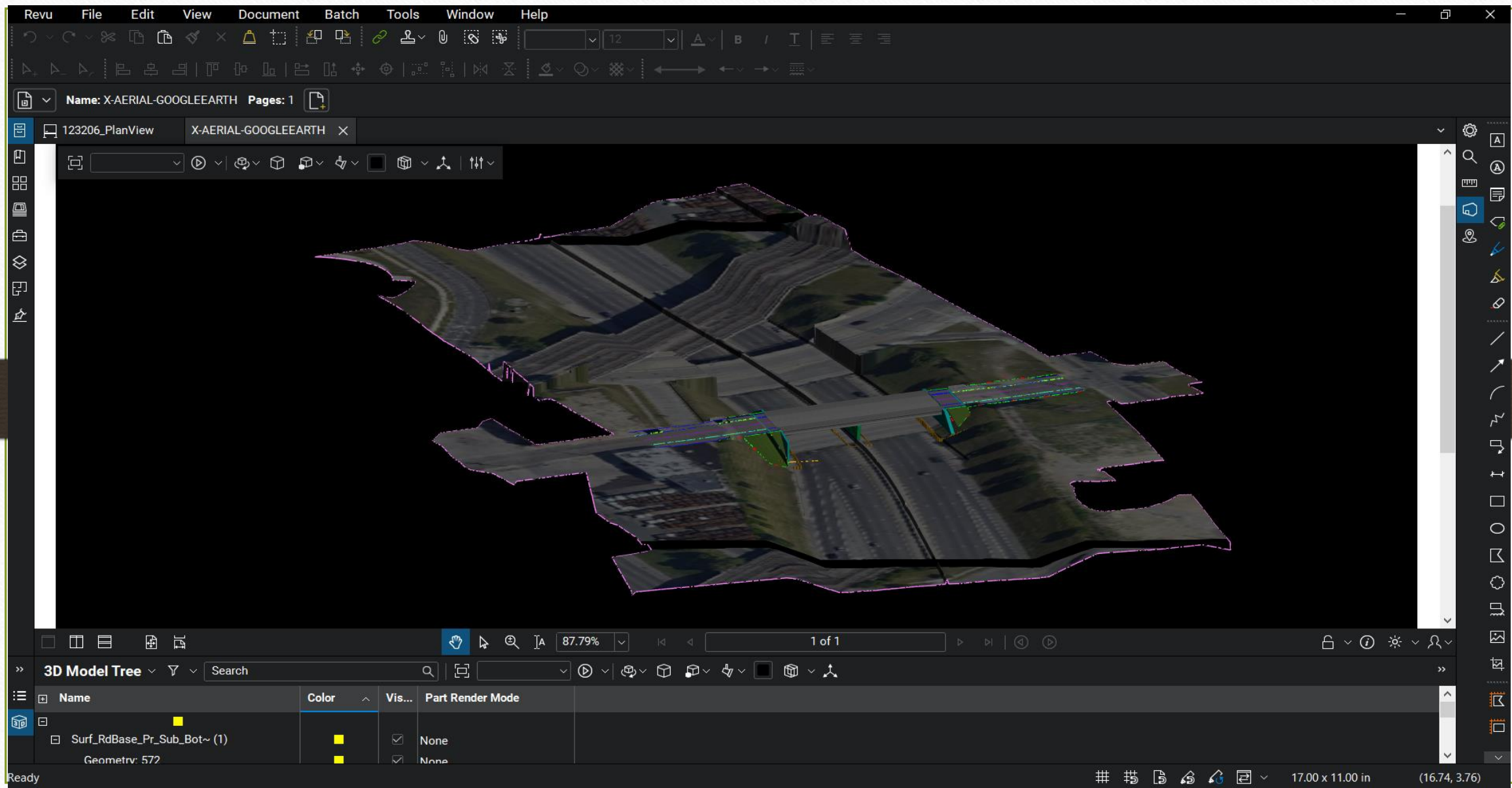
Project PDF Overview

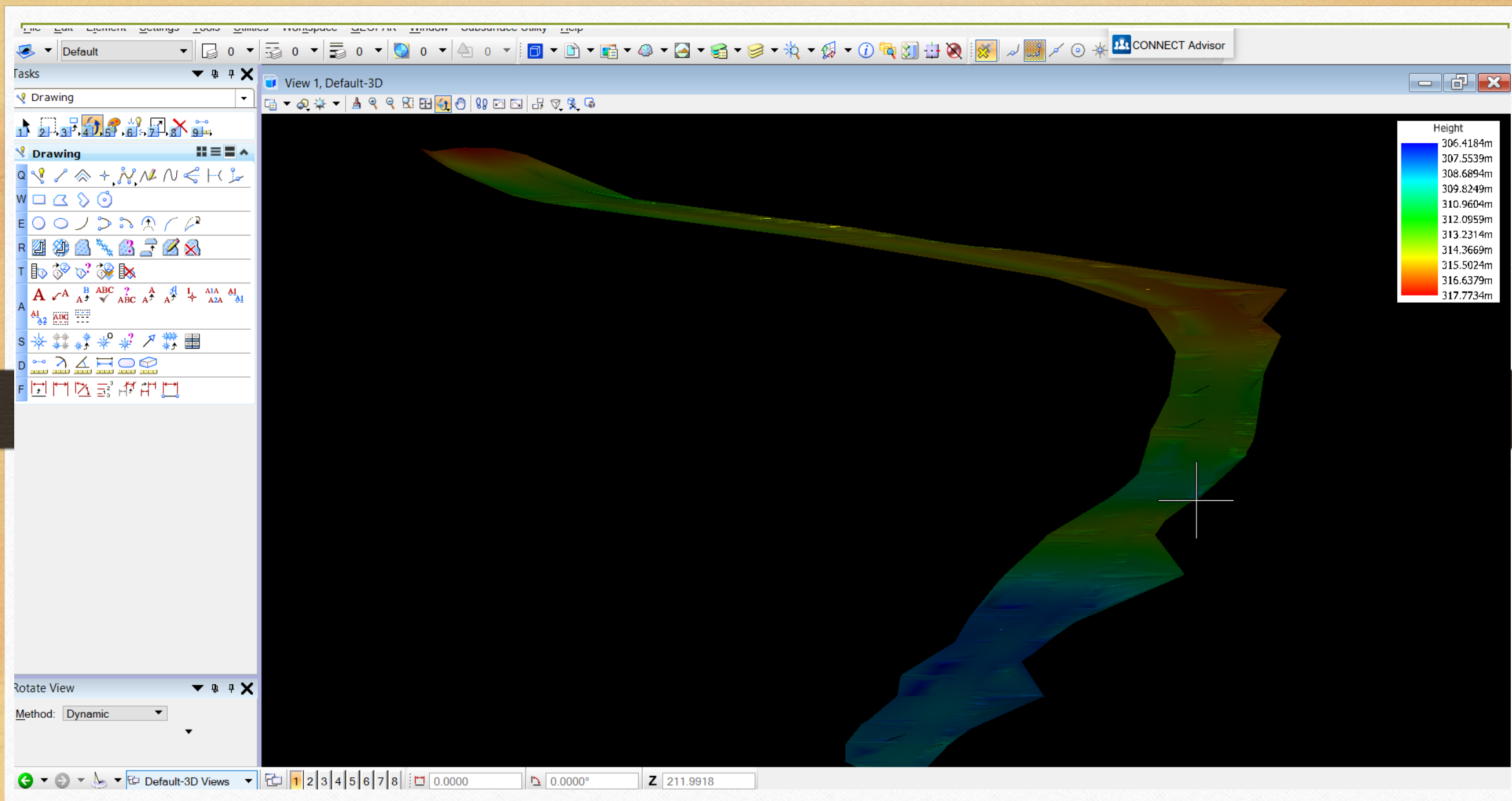
The transition to model deliverables

Rick McGowan

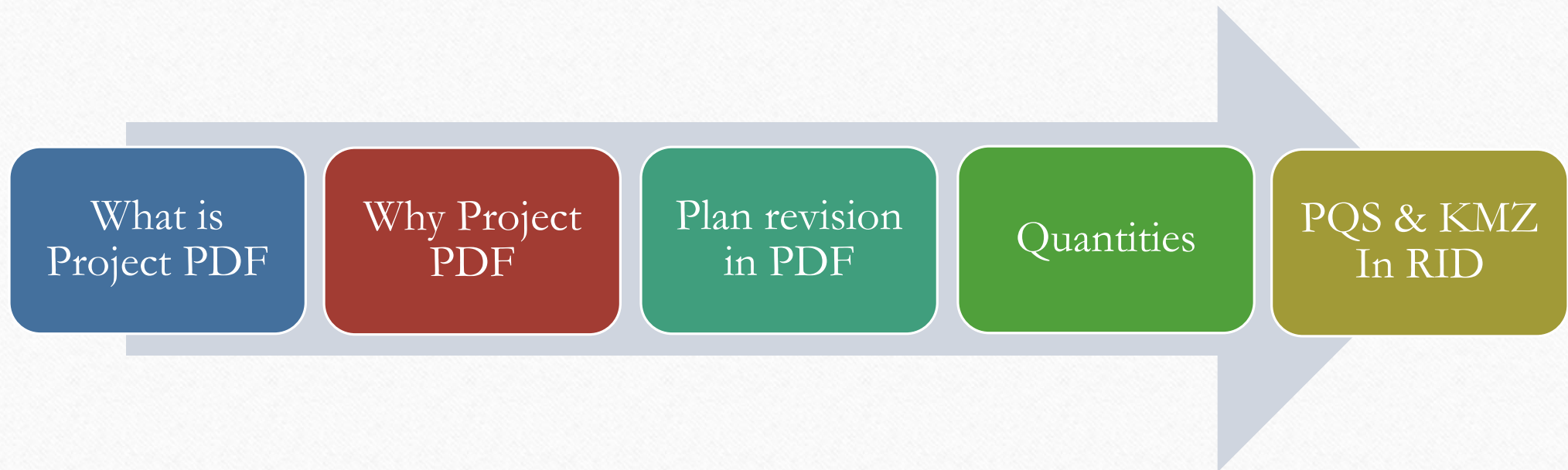
Construction Technology Innovation Analyst
MDOT – Construction Field Services (Lansing)



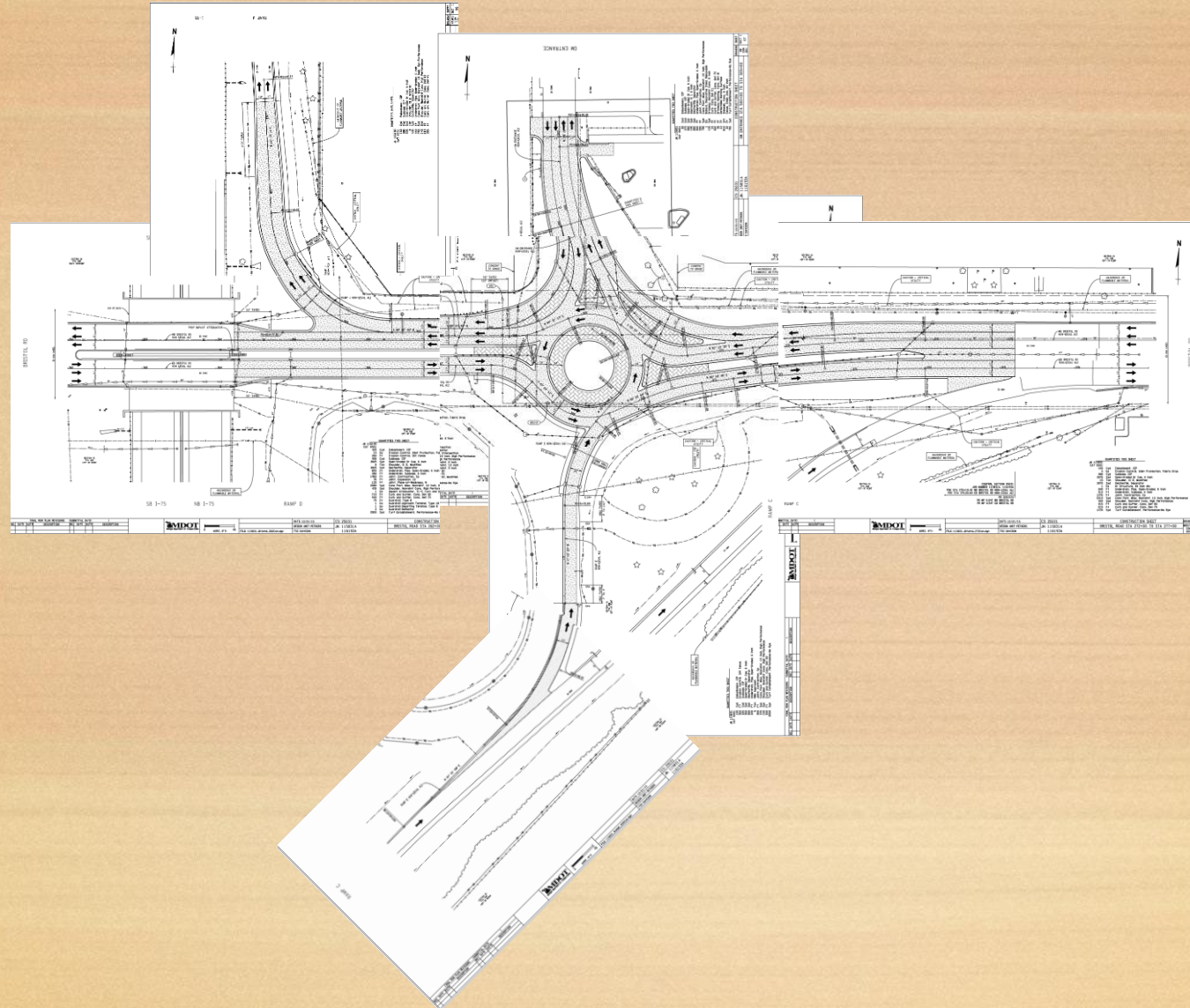




Overview



What Is Project PDF



Plan set separated into 11x17 sheets
and Project-wide Plan and Profile sheets

List Spatial		
Name	State	Status
 XXXXXX_Bridge.pdf		Checked In
 XXXXXX_Proposal.pdf		Checked In
 XXXXXX_Road.pdf		Checked In

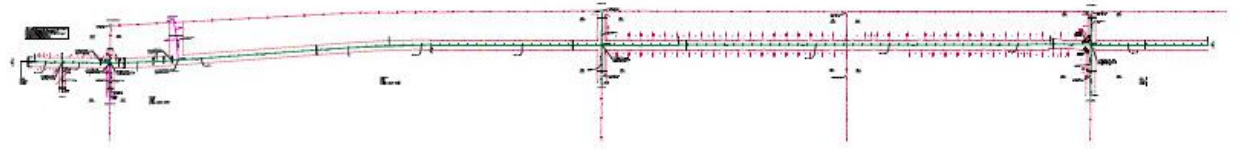
Current Setup

List Spatial		
Name	State	Status
 XXXXXX_Bridge.pdf		Checked In
 XXXXXX_Proposal.pdf		Checked In
 XXXXXX_Road.pdf		Checked In
 XXXXXX_Road_PlanView.pdf		Checked In
 XXXXXX_Road_ProfileView.pdf		Checked In

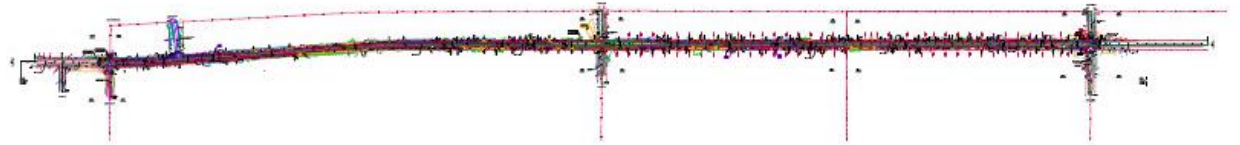
Project PDF Setup

Look of Project PDF

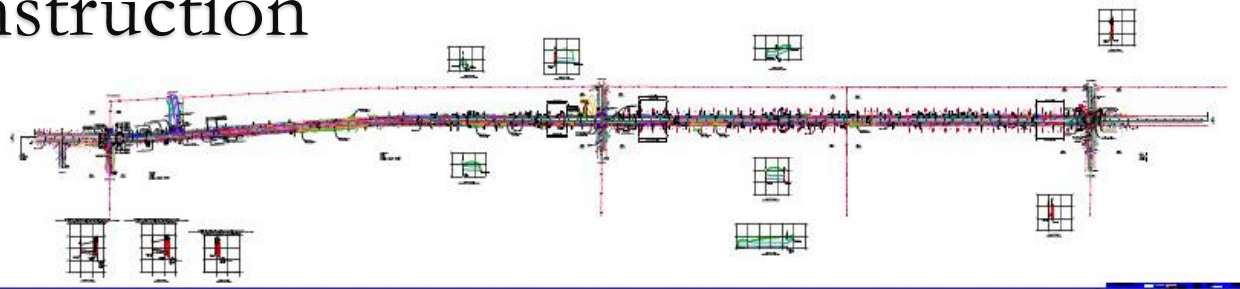
Alignment



Removal



Construction





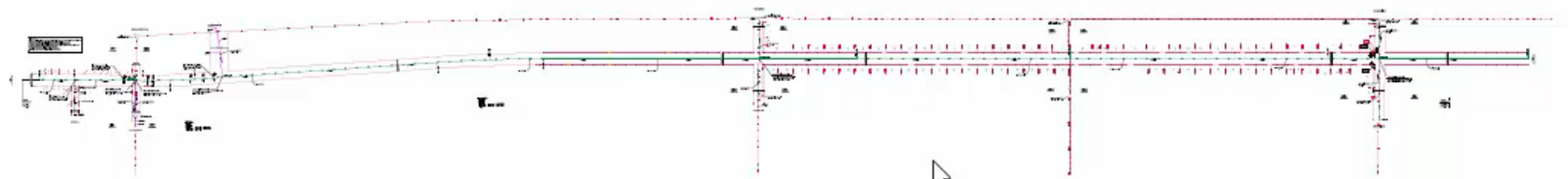
1 / 5



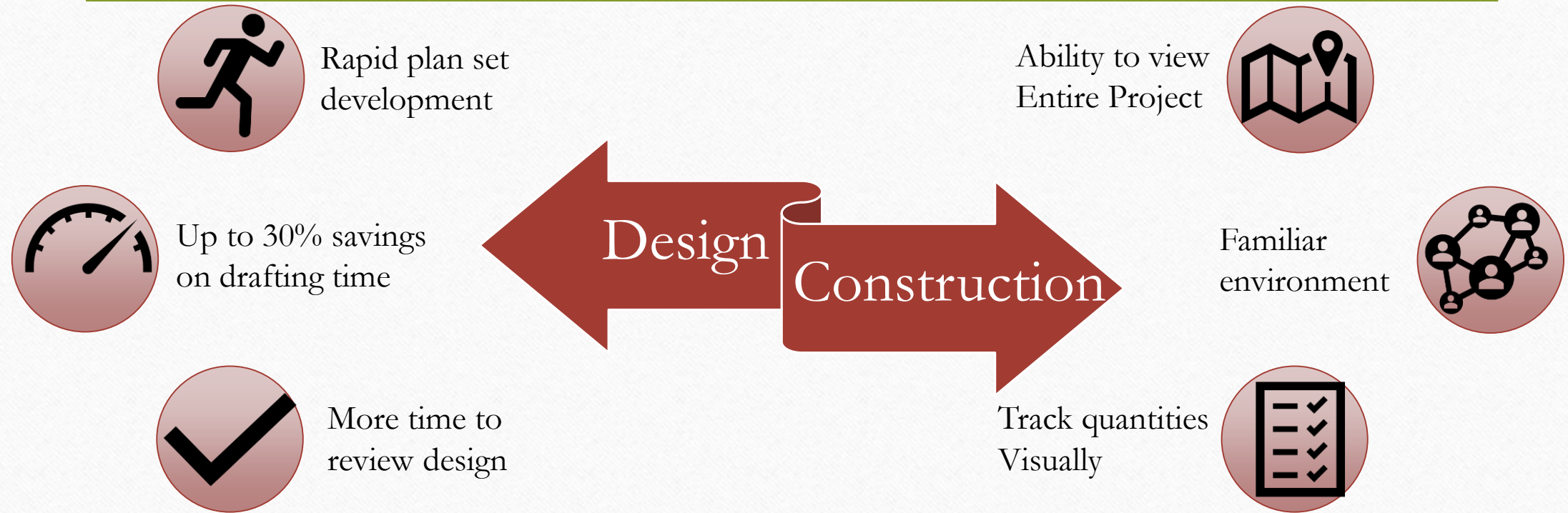
6.94%



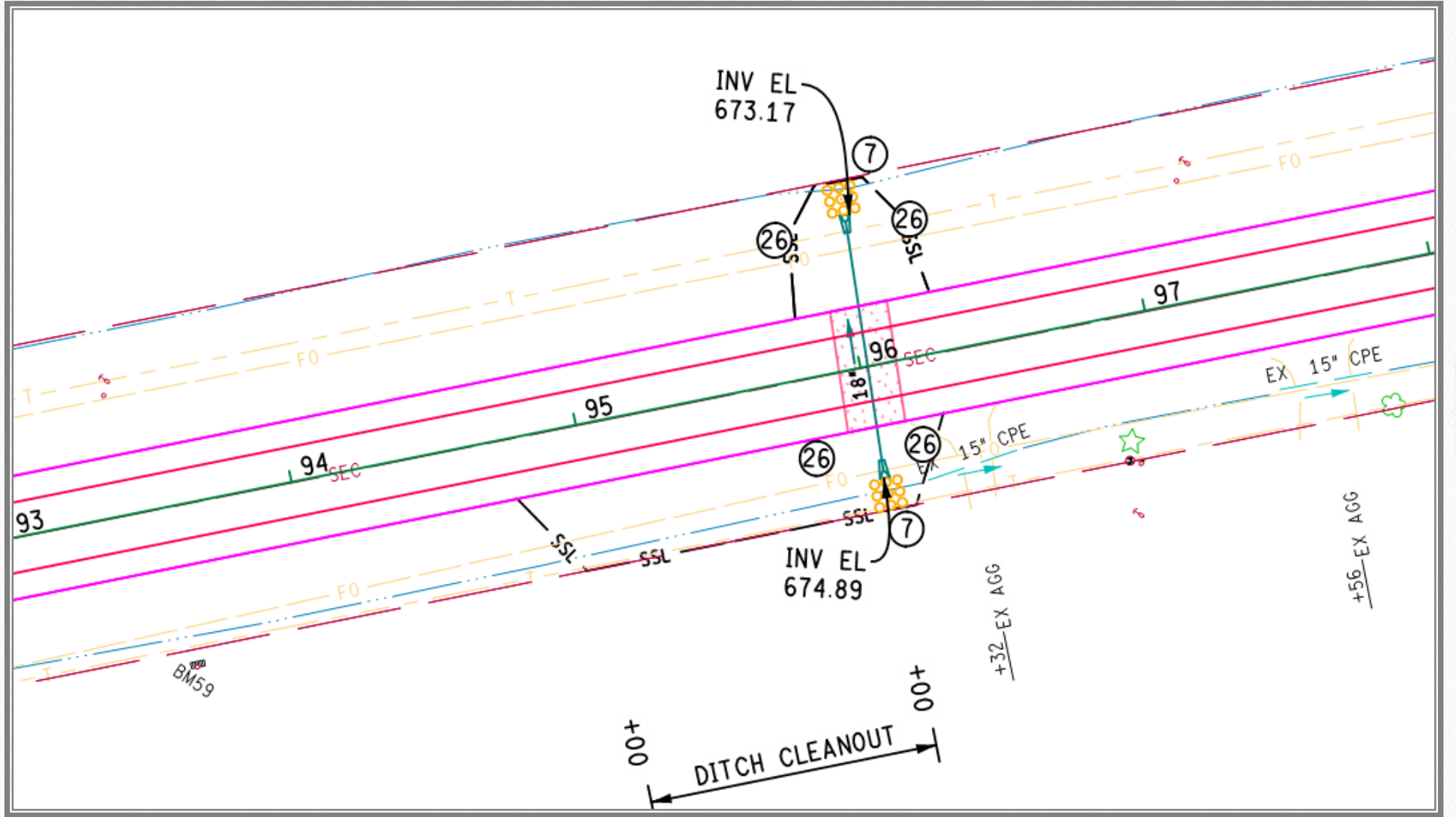
Share



Why Project PDF



Why Project PDF



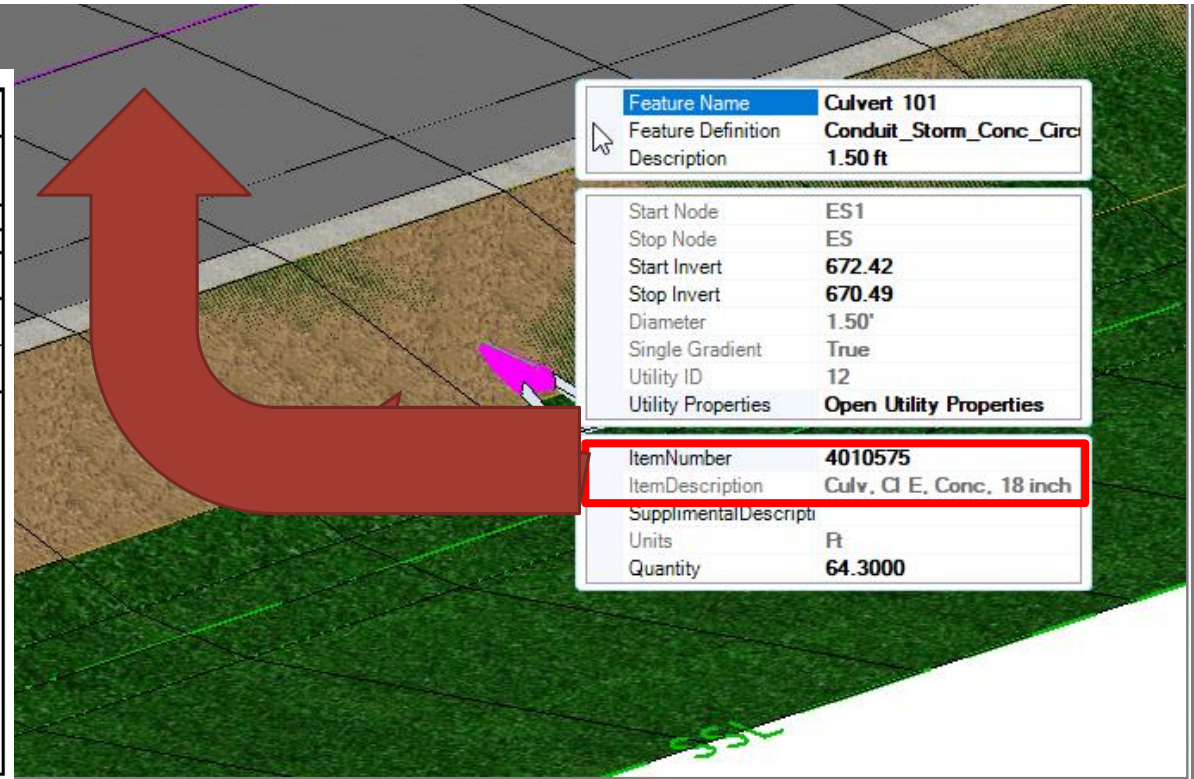
Contractual 3D Model

Reinforced Concrete Culvert (RCP)

- Fractures or cracks passing through the shell, except for a single end crack that does not exceed the depth of the joint.
- Defects that indicate imperfect proportioning, mixing or molding.
- Defects which indicate honeycombed or open texture.
- Damaged or cracked ends where such damage would prevent making a satisfactory joint.
- Exposed circumferential steel reinforcement that would indicate misalignment of the reinforcing.
- Any continuous crack having a surface width of 0.01 inch (0.25 mm) or more and extending for a length of 12 inches (300 mm) or more, regardless of position in the wall of the pipe.
- Small imperfections in manufacture or damage during handling. These may be repaired as long as repairs are sound and properly finished and cured.

Type of Pipe Depth of Cover (ft) (a)	Class A Culvert 0-10 (l)	Class B Culvert >10-16	Class C Culvert >16-23	Class D Culvert >23-33 (i)	Class E Culvert 0-3 (b)	Class F Drive Culvert (c)
Reinforced Concrete Pipe (d)	II	III	IV	V	IV	II
Nonreinforced Concrete Pipe (e)	1	3	No	No	No	1, 3 (f)
Corrugated and Spiral Ribbed Al- Alloy Pipe	Yes	Yes	Yes	Yes	No	Yes
Corrugated and Spiral Ribbed Steel Pipe	Yes	Yes	Yes	Yes	No	Yes
Smooth-Lined Corrugated Plastic Pipe (CPE) (g, j)	Yes (h)	Yes (k)	No	No	No	Yes (h)

a. Cover, including the pavement structure is the height of fill above the top of the pipe.
b. Class E culvert applies if the culvert is beneath the influence of proposed pavement and the depth of cover is 3 ft or less.
c. Class F culvert applies for driveway culverts (residential and commercial).
d. Roman numerals refer to class of reinforced concrete pipe in accordance with AASHTO M 170.
e. Arabic numerals refer to the class of nonreinforced concrete pipe in accordance with AASHTO M 86.
f. Nonreinforced concrete pipe Class 1 is allowed for Class F culverts with a depth of cover up to 10 ft.
Nonreinforced concrete pipe Class 3 is allowed for Class F culverts with a depth of cover from 10 ft to 16 ft.
g. Provide CPE in accordance with AASHTO M 294, Type S polyethylene pipe.
h. Allowed only for no greater than 36 in diameter pipe for CPE pipes
i. Special design is required for fill heights greater than 33 ft.
j. At least 2 ft cover if the culvert is outside the influence of proposed pavement (measured from top of pipe to final grade)
k. Allowed only for 12 in to 24 in diameter CPE pipes. Refer to the Class B Plastic Pipe Qualified Products List for approved manufacturers and products.
l. Class A culvert applies if the culvert is outside the influence of proposed pavement or is beneath the influence of proposed pavement and the depth of cover is from 3 ft to 10 ft.



Quantities in Project PDF

Type of Information		Examples		Where Quantity is Shown
Project Wide Quantities		Pavement, Sidewalk, Curb		PQS and KMZ
Non-Project wide Quantities		Details, Drainage, guardrail, Signals		Same Place as always

Project Quantity Spreadsheet - RID

Item Location

123206A - 0001 - 123206_MSCQNT_001

123206A - 0001 - CON_01_1011-1037

123206A - 0001 - CON_02_1037-1069

123206A - 0001 - CON_03_1069-79

123206A - 0001 - CON_04_79-132

123206A - 0001 - CON_05_132-185

123206A - 0001 - REM_01_1011-1037

123206A - 0001 - REM_02_1037-1069

123206A - 0001 - REM_03_1069-79

123206A - 0001 - REM_04_79-132

123206A - 0001 - REM_05_132-185

Filters

JN

Category

Work Item

Table - Type

Table - Name

(All)

(All)

(All)

(All)

(All)

Item No	Pay Item Name	Units	Unit Price	Quantity	Grand Total
5010061	HMA Approach	Ton	(blank)	354	\$0.00
8020016	Curb and Gutter, Conc, Det B2	Ft	(blank)	248	\$0.00
4010608	Culv, CI F, 15 inch	Ft	(blank)	602	\$0.00
4010166	Culv, CI A, Conc, 15 inch	Ft	(blank)	102	\$0.00
4010134	Culv, CI A, 24 inch	Ft	(blank)	72	\$0.00
3070028	Approach, CI II, 6 inch	Syd	(blank)	47	\$0.00
3010002	Subbase, CIP	Cyd	(blank)	76	\$0.00
2050016	Excavation, Earth	Cyd	(blank)	10	\$0.00
4010949	Culv, Slip End Sect, 1 on 6, 15 inch, Longit	Ea	(blank)	26	\$0.00
4010923	Culv, Slip End Sect, 1 on 4, 24 inch, Longit	Ea	(blank)	2	\$0.00
8130010	Riprap, Plain	Syd	(blank)	10	\$0.00
5010056	HMA, 5E1	Ton	(blank)	780	\$0.00
5010050	HMA, 4E1	Ton	(blank)	1010	\$0.00
5010703	HMA, LVSP	Ton	(blank)	1190	\$0.00
2057021	Embankment, CIP, Special	Cyd	(blank)	18	\$0.00
3020016	Aggregate Base, 6 inch	Syd	(blank)	1130	\$0.00
Grand Total				5677	\$0.00

Category

Plan Sheets

Table | Drain

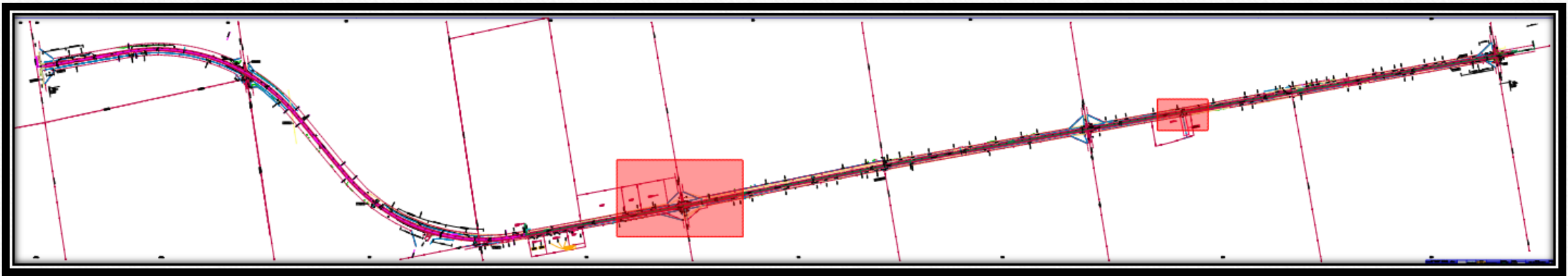
Table | Driveway

Project Qnty

Summary | Qnty

Summary | Est

Dr\ ...



Plan Revision

Michigan Department
Of Transportation
0291 (09/10)

Page 1 of 2

REVISION OF PLANS

INSTRUCTIONS: ADD ADDITIONAL SHEETS, IF NECESSARY, FOR "DESCRIPTION OF CHANGES"

FUND/CONTROL SECTION/JOB NO. XXXX / XXXXX / XXXXXX		LOCATION
DATE MM/DD/YYYY	REVISION NO. []	Description

DESCRIPTION OF CHANGES

Sheet XXX - Revised taper intersection taper at Station 79+00 Hansen Road
Sheet XXX - Revised south driveway at station 144+00

QUANTITY CHANGES (Continue on page 2 if needed)

ITEM	UNIT	CONTRACT QUANTITY	CHANGE PREV. REV.	CHANGE THIS REV.	REVISED QUANTITY
HMA, SE3	Ton	15,792	0	120	15,912
HMA Approach	Ton	787	0	20	807

NECESSITY FOR CHANGE

PREPARED BY (Initials)

DATE

DATE PLAN REVISED

APPROVED BY (Project Mgr/Development Engineer)

DATE

SHEET NO.'S

APPROVED BY (Resident/Delivery Engineer)

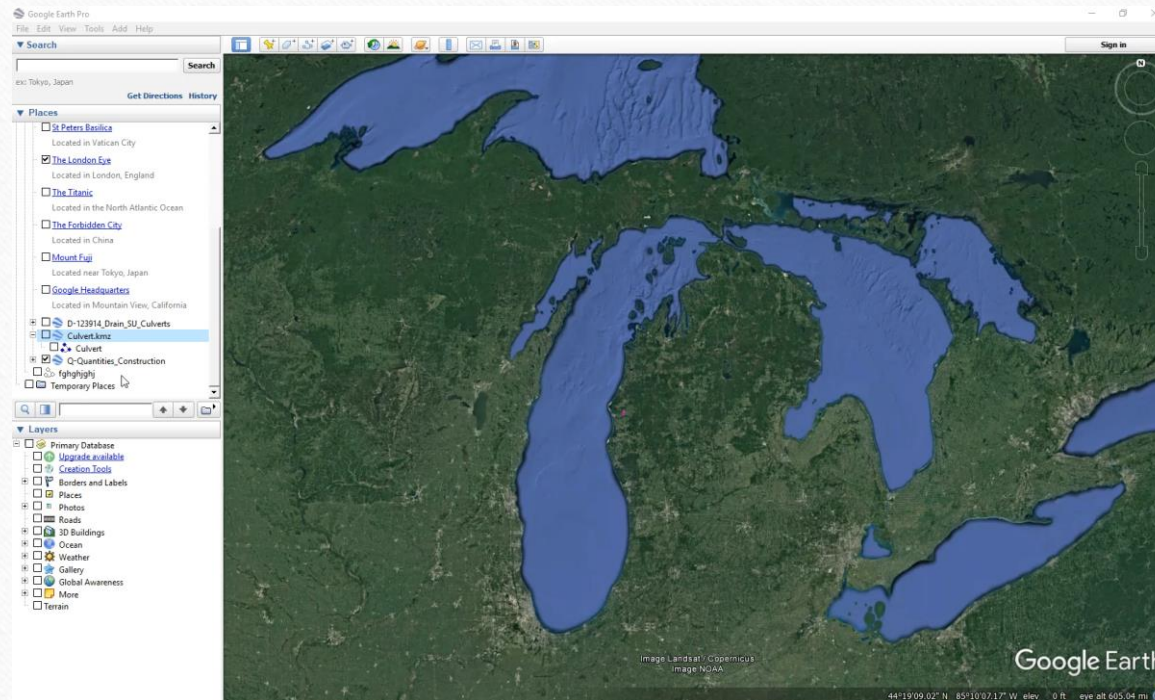
DATE

DATE REVISED SHEETS ISSUED

DATE FHWA APPROVAL (Oversight Non-exempt)

ADDITIONAL INFORMATION (Attach additional pages if necessary)

KMZ – Google Earth file for Plan Quantity Shapes – RID





Value Added

117578 I-696 Plan View 001 5-3-18 117578 I-696 Plan View 003 5-3-18 117578 I-696 Plan View 002 5-3-18

RECENTS

studio.bluebeam.com

Home Session Project

Leave

JN 117578 I-696 Inlay Session - 243-129-952

Status:

Attendees

- johnsond10 117578 I...
- hllj20 117578 I...

Documents

- 117578 I-696 MOT Plan View 5-3-1...
- 117578 I-696 Plan View 001 5-3-18...

Record Notifications Pending

- 20976 KamyszekK: Left Session
- 20977 paronashj: Left Session
- 20978 Luke Cooper: Left Session
- 20979 KamyszekK: Joined Session
- 20980 KamyszekK: Add HMA Paving
- 20981 KamyszekK: Edit HMA Paving
- 20982 KamyszekK: Set Markup Layer
- 20983 KamyszekK: Edit HMA Paving
- 20984 KamyszekK: Move HMA Paving
- 20985 KamyszekK: Undo
- 20986 KamyszekK: Edit HMA Paving

Subject Date Author Comments Prop Line

Pavement Markings	9/7/2018 9:55:13AM	alpha.perkins	Lane 3 227' Partial 650+74 to 609+98 Lane 2 4.070 One pass.	
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Ready

Type here to search

Subject: alpha.perkins photo

Snap To: Grid Content Markup | Show Grid | Reuse | Sync

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4:06 PM 10/23/2018

Questions

