

D	Project Name HOLLY SPRINGS GRASSROOT BULK DRUG SUBSTANCE FLEXBATCH	PEC Activity Diagram
	Industry Code 13 Pharmaceutical & Biotech	Project Type Grassroot
	TIV (USD) 550,000,000	
	SIC Code 2836 Biological Products, Except Diagnostic Substances	Sector Ingredients (APIs, Bulk, Excipients, etc.)
	SIC Product 2836*0032 Active Pharmaceutical Ingredients (APIs)	
	Status Active	Last Update 21-Apr-2022
	Environmental Air (A) Land (L) Water (W)	Initial Release 03-Aug-2021
		Construction Labor Preference Union, Non-Union
		Operations Labor Preference Union, Non-Union
	Square Footage	New Sq. Ft. 350,000 Sq. Ft.
	Plant Owner Amgen Incorporated	Plant Parent Amgen Incorporated
	Plant Name Holly Springs API Biologics Manufacturing	Unit Name
	Plant ID 3471111	
	Location 4130 Friendship Road	Phone +1 805 447 1000
	City/State Holly Springs, North Carolina 27540 U.S.A.	Zone/County NC*02, Wake
Project Responsibility	Project Company	Project Contact
Project Executive	Amgen Incorporated One Amgen Center Drive Thousand Oaks, California 91320-1730 U.S.A.	Arleen Paulino Senior Vice President Global Manufacturing [Tel.] +1 805 447 1000 [E-Mail] arleen.paulino@amgen.com ; [LinkedIn] arleen-paulino-6883256
Project Director	Amgen Incorporated One Amgen Center Drive Thousand Oaks, California 91320-1730 U.S.A.	Bob Kenyon Vice President of Manufacturing [Tel.] +1 805 447 1000 / [Alt.] +1 787 916 6200 [E-Mail] rkenyo01@amgen.com ; [LinkedIn] robert-kenyon-970001a
Eng	Kimley-Horn and Associates Incorporated 421 Fayetteville Street Suite 600 Raleigh, North Carolina 27601 U.S.A.	Josh Griffin Engineering Manager [Tel.] +1 919 677 2000 [E-Mail] josh.griffin@kimley-horn.com ; [LinkedIn] josh-griffin-6605834b
EPC	Integrated Project Services (IPS) LLC 2860 Michelle Drive, Suite 200 Irvine, California 92606 U.S.A.	John Dumas Project Manager [Tel.] +1 949 679 4682 [E-Mail] jdumas@ipsdb.com ; [LinkedIn] john-dumas-b1537129
EPC	Integrated Project Services Incorporated 2803 Slater Road, Suite 130 Morrisville, North Carolina 27560 U.S.A.	Tim Griffin Project Director [Tel.] +1 919 460 6636 [E-Mail] tgriffin@ipsdb.com ; [LinkedIn] timgriffin3
Consultant	Town of Holly Springs 128 South Main Street Holly Springs, North Carolina 27540 U.S.A.	Irena Krstanovic Economic Development Director [Tel.] +1 919 557 3923 [E-Mail] irena.krstanovic@hollyspringsnc.gov ; [LinkedIn] irena-krstanovic-617aaa24
PEC® Timing	E2	PEC® Activity Planning and Scheduling
Project Probability	High (81-99%)	
Scope	Amgen Incorporated with Kimley-Horn and Associates (Civil/Structural), Integrated Project Services Incorporated (IPS) and Town of Holly Springs performs Planning and Scheduling for Grassroot Bulk Drug Substance FlexBatch Manufacturing Plant. DETAILS: Within Friendship Innovation Park, construct 350,000 sqft site and equip for the manufacturing and warehousing of multi-product bulk drug substances. REQUIRES: Building, Building Automation Systems, Temperature and Humidity Controls, Fire and Security System, Voice/Data/Wireless System, Industrial Gas Supply and Storage, Air/Gas Vacuum System, Bioreactors, Chromatography Equipment, Stainless Steel-Fed Batch Manufacturing Systems, Single-Use Technologies, Centrifugal- and Filtration-Based Separation Equipment, Aseptic Packaging Equipment, Controls (PLC), Delta V Controls (DCS), Mixing Tanks, Freezers, Refrigeration, Isolators, Purification Equipment, Floor/Topical Coatings and Sealing, Sealed/Explosion Proof Wiring and Sealed Systems, Warehouse Management Systems (WMS), Laboratory Stations, Data Recorders, Analytical/Testing Equipment, Cleanrooms (ISO 7-8/Class 10,000-100,000), NGF Boiler, Emergency Generators, Pumps, Motors, Valves, Water Purification System, Compressors (Air). ENVIRONMENTAL: (A) HEPA Filtration System, Dust Collectors; (L) Containment; (W) Pre-Wastewater Treatment System.	
Schedule	Amgen Incorporated with Kimley-Horn and Associates (Civil/Structural), Integrated Project Services Incorporated (IPS) and Town of Holly Springs continues with Planning and Scheduling through 2Q22 (Apr). Amgen with project team releases any remaining Equipment RFQs plus Subcontractor Bid Documents 4Q21 (Nov)-2Q22. Tentative Construction Kick-Off 2Q22 (Apr). Project Completion 4Q24 (Dec).	
Details	Feb-2022 Project in Planning and Scheduling	
Market Trends	Green House Reduction (GHG)	
Project Milestones	AFE 202112	Sub Bid Doc 202111
		Completion 31-Dec-2024
		Precision YEAR

	Equip RFQ 202111		Kick-Off 202204		Kickoff Slippage 4 Months		Duration 33 Months
Engineering	Electrical		Environmental HVAC		Instrumentation	Mechanical	Structural
Contracting Civil	Electrical		Environmental HVAC		Instrumentation	Mechanical	Structural General [G/C]
Project Key Needs	Civil/Site	Structural		Control Room	Process Equip	Heat Transfer	
	Instrumentation	Electrical	Mechanical	HVAC	Storage		
	Piping/Fittings	Insulation/Coatings	Environmental	Utilities	Valves	Pumps	
			Batch Process		Packaging		
Matter Phase		Material Handling					
Energy		Liquid			Solid		
Buy		Boiler			Generator		
Sell							
Project Fuel Type	Natural Gas						

Plant Standard Contacts			
Functional/Actual Title	Contact Name/E-mail	Telephone/On-site	QC Date/LinkedIn ID
Plant Manager	Bob Kenyon	[Phn.] +1 805 447 1000 / [Alt.] +1 787 916 6200	Aug-2021
Vice President of Manufacturing	rkenyo01@amgen.com	Yes	robert-kenyon-970001a

Historical Reports

Project Name	Report Date	TIV	Phase
HOLLY SPRINGS GRASSROOT API BIOLOGICS MANUFACTURING PLANT	03-Aug-2021	550,000,000 USD	Preliminary Design (P1 - 07)
HOLLY SPRINGS GRASSROOT API BIOLOGICS MANUFACTURING PLANT	12-Aug-2021	550,000,000 USD	Preliminary Design (P1 - 07)
HOLLY SPRINGS GRASSROOT BULK DRUG SUBSTANCE FLEXBATCH MANUFACTURING PLANT	13-Aug-2021	550,000,000 USD	Preliminary Design (P1 - 07)
HOLLY SPRINGS GRASSROOT BULK DRUG SUBSTANCE FLEXBATCH MANUFACTURING PLANT	30-Aug-2021	550,000,000 USD	Preliminary Design (P1 - 07)
HOLLY SPRINGS GRASSROOT BULK DRUG SUBSTANCE FLEXBATCH MANUFACTURING PLANT	31-Aug-2021	550,000,000 USD	Preliminary Design (P1 - 07)
HOLLY SPRINGS GRASSROOT BULK DRUG SUBSTANCE FLEXBATCH MANUFACTURING PLANT	31-Aug-2021	550,000,000 USD	Preliminary Design (P1 - 07)
HOLLY SPRINGS GRASSROOT BULK DRUG SUBSTANCE FLEXBATCH MANUFACTURING PLANT	31-Aug-2021	550,000,000 USD	Preliminary Design (P1 - 07)
HOLLY SPRINGS GRASSROOT BULK DRUG SUBSTANCE FLEXBATCH MANUFACTURING PLANT	31-Aug-2021	550,000,000 USD	Preliminary Design (P1 - 07)
HOLLY SPRINGS GRASSROOT BULK DRUG SUBSTANCE FLEXBATCH MANUFACTURING PLANT	31-Aug-2021	550,000,000 USD	Preliminary Design (P1 - 07)
HOLLY SPRINGS GRASSROOT BULK DRUG SUBSTANCE FLEXBATCH MANUFACTURING PLANT	31-Aug-2021	550,000,000 USD	Preliminary Design (P1 - 07)
HOLLY SPRINGS GRASSROOT BULK DRUG SUBSTANCE FLEXBATCH MANUFACTURING PLANT	01-Sep-2021	550,000,000 USD	Preliminary Design (P1 - 07)
HOLLY SPRINGS GRASSROOT BULK DRUG SUBSTANCE FLEXBATCH MANUFACTURING PLANT	01-Sep-2021	550,000,000 USD	Preliminary Design (P1 - 07)
HOLLY SPRINGS GRASSROOT BULK DRUG SUBSTANCE FLEXBATCH MANUFACTURING PLANT	03-Nov-2021	550,000,000 USD	Detailed Design (P1 - 09)
HOLLY SPRINGS GRASSROOT BULK DRUG SUBSTANCE FLEXBATCH MANUFACTURING PLANT	21-Jan-2022	550,000,000 USD	Detailed Design (P1 - 09)
HOLLY SPRINGS GRASSROOT BULK DRUG SUBSTANCE FLEXBATCH MANUFACTURING PLANT	04-Feb-2022	550,000,000 USD	Planning and Scheduling (E
HOLLY SPRINGS GRASSROOT BULK DRUG SUBSTANCE FLEXBATCH MANUFACTURING PLANT	21-Apr-2022	550,000,000 USD	Planning and Scheduling (E